

**WHITE PAPER
OF DEFENSE
NATIONAL
BRAZIL 2020**

SUMMARY

THE STRATEGIC ENVIRONMENT OF THE 21st CENTURY	13
CONTEXTUALIZATION OF THE STRATEGIC ENVIRONMENT	15
Conjunctural and structural aspects that may affect National Defense	15
Defense and the International System	16
Defense and Regional Systems	16
South Atlantic	17
INTERNATIONAL REGIMES AND TREATIES WITH DEFENSE REFLECTIONS	17
International disarmament and non-proliferation regimes of nuclear weapons	18
Sensitive Goods Export Control Regimes	19
Nuclear Non-Proliferation	19
INTERNATIONAL REGIMES OF THE SEA, ANTARCTIC AND OUTER SPACE	20
Maritime Space	20
Antarctic continent	22
Outer space	22
International environmental regimes	23
Cyberspace	23
THE BRAZILIAN STATE AND NATIONAL DEFENSE	25
BASIC PRINCIPLES OF THE STATE	27
TERRITORY	28
POPULATION AND CULTURE	31
NATIONAL DEFENSE	33
The National Defense Policy and Strategy	33

The National Defense Policy (PND)	34	Air and Naval Means of the Squadron	57
The National Defense Strategy (END)	35	The Naval Districts	57
Foreign and defense policies	36	District naval assets	58
		The Marine Corps (CFN)	59
		Organization	61
DEFENSE AND THE MILITARY INSTRUMENT	39	The Directorate General of Navigation (DGN)	62
		Capabilities	63
THE MINISTRY OF DEFENSE	41	Education – main schools	64
The Ministry of Defense and the Preparation and Employment of the Armed Forces	43	Naval School (EN)	64
Organizational structure of the Ministry of Defense	44	Naval College	65
Joint Chiefs of Staff of the Armed Forces (EMCFA)	44	Naval War College (EGN)	65
Head of Joint Operations (CHOC)	44	Admiral Wandenkolk Training Center (CIAW)	65
Head of Strategic Affairs (CAE)	45	Almirante Newton Braga Instruction and Training Center (CIANB)	66
Head of Logistics (CHELOG)	45	Navy Health School (ESM)	66
Superior School of War (ESG)	45	Center for Political-Strategic Studies (CEPE-MB)	66
Strategic sectors for Defense	46	Center for the Coordination of Studies in São Paulo (CEMSP)	67
The Nuclear Sector	46	Almirante Alexandrino Instruction Center (CIAA)	67
The Cyber Sector	46	Almirante Sylvio de Camargo Instruction Center (CIASC)	67
The Space Sector	47	Scientific and technological institutions	68
Monitoring and control systems	49	Navy Technological Center in São Paulo (CTMSP)	68
Blue Amazon Management System (SisGAAz)	49	Directorate of Nuclear Development of the Navy (DDNM)	68
Integrated Border Monitoring System (SISFRON)	49	Navy Technological Center in Rio de Janeiro (CTMRJ)	68
Brazilian Airspace Control System (SISCEAB)	50	Almirante Paulo Moreira Institute of Sea Studies (IEAPM)	69
Brazilian Aerospace Defense System (SISDABRA)	50	Marine Research Institute (IPqM)	69
national mobilization	51	Naval Systems Analysis Center (CASNAV)	69
National Mobilization System (SINAMOB)	51	Directorate-General for Nuclear and Technological Development of the Navy (DGDNTM)	69
Military service	52	Exchange and cooperation with other countries	70
Defense Intelligence System (SINDE)	52	Military exercises with other countries (2016/2019)	70
		Women in the Navy	72
BRAZIL'S NAVY	52		
Brazilian Navy Mission	53	BRAZILIAN ARMY	73
Organization and operating means	54	Brazilian Army Mission	74
The Naval Operations Command (ComOpNav)	56	Organization and operating means	75

Ground Force	76	Technological Institute of Aeronautics (ITA)	94
Land Force Structure	77	School of Aeronautics Specialists (EEAR)	95
Education – main schools	79	Preparatory School for Air Cadets (EPCAR)	95
Agulhas Negras Military Academy (AMAN)	79	Scientific and technological institutions	95
Preparatory School for Army Cadets (EsPCEEx)	80	Institute of Aeronautics and Space (IAE)	95
Officer Improvement School (EsAO)	80	Institute for Advanced Studies (IEAv)	95
Army Command and General Staff School (ECEME)	80	Flight Research and Testing Institute (IPEV)	96
Military Institute of Engineering (IME)	80	Institute of Operational Applications (IAOp)	96
Army Health School (EsSEEx)	81	Alcântara Launch Center (CLA)	96
Army Complementary Training School (EsFCEEx)	81	Barreira do Inferno Launch Center (CLBI)	97
School of Sergeants of Arms (ESA)	81	Airspace Control Institute (ICEA)	97
School of Logistics Sergeants (EsSLog)	82	Air Force Logistics Institute (ILA)	97
School for the Improvement of Sergeants of Arms (EASA)	82	Institute for Promotion and Industrial Coordination (IFI)	98
Scientific and technological institutions	83	Department of Aerospace Science and Technology (DCTA)	98
Army Technological Center (CTEx)	83	Exchange and cooperation with other countries	98
Army Physical Training Center (CCFEx)	83	Military exercises with other countries (2016/2019)	99
Army Assessment Center	83	Women in the Air Force	100
Directorate of the Geographical Service (DSG)	84		
Agency for Management and Technological Innovation (AGITEC)	84	EXAMPLES OF USE OF THE MILITARY INSTRUMENT	101
Exchange and cooperation with other countries.	85	Brazil's participation in the great world wars	101
Military exercises with other countries (2016/2019)	85	World War I	101
Women in the Army	86	World War II	102
		Brazil's participation in peacekeeping operations	105
BRAZILIAN AIR FORCE	87	Coordination Operations with Agencies	107
Air Force Mission	88		
Organization	89	DEFENSE AND SOCIETY	109
Preparation Command (COMPREP)	91		
Education – main schools	92	SUBSIDIARY ATTRIBUTIONS	110
Air Force Academy (AFA)	92	Brazilian Navy and its actions	111
University of the Air Force (UNIFA)	93	Control and Provision of Maritime Security	111
Air Force Command and General Staff School (ECEMAR)	94	Search and Rescue	112
Air Force Officer Improvement School (EAOAR)	94	Hospital care in the Amazon	112
Aeronautics Instruction and Adaptation Center (CIAAR)	94		

Brazilian Army and its actions	113	SCIENCE, TECHNOLOGY AND	135
Border Security	113	INNOVATION 1. MD Central	136
Support for society and contribution to national development	114	Administration 2.	137
Brazilian Air Force and its actions	115	Brazilian Navy 3.	142
Integrated Control of Brazilian Airspace	115	Brazilian Army 4. Brazilian Air Force	145
Aeromedical Evacuations	116		
Search and Rescue	116		
Transport of Organs	116	DEFENSE ECONOMY	149
SOCIAL PROGRAMS COORDINATED BY THE MINISTRY OF DEFENSE	118	DEFENSE BUDGET	150
Citizen Soldier Project	118	the budget process	150
Calha Norte Program (PCN)	119	Defense budget principles	151
Strengths in Sport Program (PROFESP)	119	Classification of White Paper budget information	151
Project João do Pulo (PJP)	120	Defense budget execution	154
High Performance Athletes Incorporation Program (PAAR)	121	The execution of financial expenses	155
Rondon Project	123	The execution of primary expenses	157
The Defense and the Academy	124	The execution of primary expenses in the Navy Command	159
Support Program for Teaching and Scientific and Technological Research in Defense		The execution of primary expenses in the Army Command	160
National (Pro-Defense)	125	The execution of primary expenses in the Air Force Command	161
Academic Congress on National Defense (CADN)	125	mandatory expenses	162
Extension Course in National Defense (CEDN)	125	The evolution of mandatory Central Administration expenditures	164
Competitions for Monographs and Dissertations and Theses on National Defense	126	The evolution of the mandatory expenses of the Navy Command	165
Brazilian Antarctic Program (PROANTAR)	126	The evolution of the mandatory expenses of the Army Command	166
		The evolution of mandatory expenses of the Air Force Command	167
DEFENSE AND HUMAN RIGHTS	128	discretionary expenses	169
		Evolution of Central Administration discretionary expenses	170
		Evolution of the Navy Command's discretionary expenses	171
THE TRANSFORMATION OF DEFENSE	131	Evolution of Army Command discretionary expenses	172
		Evolution of discretionary expenses of the Air Force Command	173
ARTICULATION AND DEFENSE EQUIPMENT PLAN (PAED)	133		
		STATEMENT OF INVESTMENTS IN DEFENSE International	174
DEFENSE INDUSTRIAL BASE (BID)	133	scope	174

ANNEXES	177
GUYS	178
Number of Military in 2019	178
Number of Military in 2019 by Location	179
Number of Military in 2019 in Peace Missions	180
Number of Military Attachés Abroad in 2019	181
Number of Civil Servants in the Ministry of Defense in 2019	181
DEFENSE BUDGET	182
Budget Appropriations (Constant values - BRL billion for 2019)	182
Expense Committed by Military Command (Constant Values - BRL billion for 2019)	183
Expense Committed by Expense Nature Group (Constant values - R\$ billion of 2019)	183
Expense Committed by Military Command (Constant Values - R\$ million of 2019)	184
Committed Expense Internal and External Debt (Constant Values - R\$ million of 2019)	184
Committed Expense - Funding by Military Command (Constant Values - R\$ million of 2019)	185
Spending Committed to Investments by Military Command (Constant Values - BRL million for 2019)	185
GLOSSARY	187

WHITE PAPER OF NATIONAL DEFENSE

THE ENVIRONMENT
STRATEGIC
XXI CENTURY

CHAPTER 1

The contemporary international system, marked by the exhaustion of the order that characterized the immediate post-Cold War period, has been distinguished by the accelerated process of restructuring the power relations between States. The coexistence of traditional powers and emerging powers brings new challenges in terms of Defense.

The recomposition of the system based on the coexistence of several powers is not, by itself, enough to guarantee that non-conflictual relations between States prevail and that negotiated solutions to disputes predominate, with the preponderant use of diplomatic, economic and/or legal instruments.

Defense and Diplomacy are important vectors for the preservation and strengthening of National Sovereignty, which requires close coordination between foreign and defense policies, insofar as the latter offers essential safeguards for Brazil's performance in the international scene.

Brazil must dedicate continuous attention to its defense, seeking to maintain it at a level appropriate to its political-strategic stature. National Defense, in addition to being an important vector for the preservation of National Sovereignty, also enables the maintenance of territorial integrity, the achievement of national objectives, the protection of the people and the guarantee of non-interference in the national territory and its jurisdictional waters, including overlying airspace, riverbeds and seabed. Therefore, it is necessary to invest in building and maintaining national capacities for

defense that provide adequate effectiveness to the National Defense. In this sense, it is imperative that the Armed Forces be properly prepared and kept in a permanent state of readiness to be used to fulfill their constitutional purpose.

New themes – or new ways of approaching traditional themes – began to influence the international environment of the 21st century. To the implications for National Defense arising from the world problem of drugs and international arms trafficking, the need to protect biodiversity, the possibility of cyber attacks, possible tensions arising from the growing scarcity of resources, pandemics, transnational crimes, international terrorism, piracy, among others, make explicit the growing transversality of themes related to Defense

National, which go beyond the traditional view of potential or manifest threats focused only on possible tensions or crises between States.

An international scenario characterized by uncertainties has a direct influence on both the definition of Brazilian foreign policy and its defense policy. The phenomenon of globalization it expanded access to technological advances, favored the movement of people, opened up economic and commercial opportunities and facilitated the dissemination of threats of various natures. Economic-financial, social, energy and environmental crises can also bring consequences for international peace and security.

Within the regional environment, there is a clear

opportunity to improve cooperation in the field of defense, of regional security in South America, based on cooperation through instruments that promote the development of a higher level between countries.

CONTEXTUALIZATION OF STRATEGIC ENVIRONMENT

In the composition of contemporary international poles of power, recent and traditional structures of global governance, in which new forums for political consultation come to have similar importance to others that were consolidated according to a bipolar and exclusionary logic throughout the 20th century.

In the multipolarity, which is structured today, it is natural that dynamics of conflict and cooperation coexist in the relationship between States. However, if there is a predominance of

conflict over cooperation, there will be a strategic environment of weakening multilateral coordination mechanisms. On the other hand, the prevalence of cooperation over conflict will favor the strengthening of multilateral forums.

In this new global distribution of power, Brazil must contribute to strengthening a cooperative multipolarity, consistent with its historical and traditional posture of defending the normative integrity of the international system.

SITUATIONAL AND STRUCTURAL ASPECTS THAT MAY AFFECT NATIONAL DEFENSE

Average levels of economic growth world should remain, in the coming years, similar to those verified in recent periods. Countries that have a growth greater than the world average tend to expand their global influence. The addition of global actors, with greater surpluses of power and resources,

may increase the incidence of conflicts that affect international peace and security.

The facility in communications, especially the use of social networks, allows promoting greater mobilization in defense of causes such as the environment, humanitarian catastrophes, human rights, among others.

These same means, however, can be used to manipulate situations, by state or non-state agents, in order to enhance conflicts.

International terrorism remains active in world scale and should remain so in the coming years, making the United States United States of America and the Treaty Organization of the North Atlantic act in a determined way and decisively against terrorist groups and countries that support them, directly or indirectly, which can displace terrorist networks to territories where they are not yet present.

DEFENSE AND THE INTERNATIONAL SYSTEM

Brazil works so that the multilateral consultation forums, especially those that integrate the United Nations, become more representative of the world reality of the 21st century. The effectiveness and legitimacy of the decisions and policies adopted by the UN will be greater the greater its ability to express the interests of the countries that comprise it. The country's claim regarding the comprehensive reform of the United Nations Security Council, in particular, responds to this inclusive project that has motivated Brazilian foreign policy for decades.

Brazil's importance in the area of peace and international security has been its participation in peacekeeping operations. Such operations are one of the main instruments available to the international community to deal with threats of conflict, as well as to prevent countries in post-conflict situations from seeing a resurgence of armed violence. Along with UN funds, agencies and programs, peace missions are an important facet of this Organization, since they represent the main form of legal and legitimate military action by the international community to guarantee collective security.

A clear expression of the growing

DEFENSE AND REGIONAL SYSTEMS

South American integration remains a strategic objective of Brazilian foreign and defense policies, as the country recognizes, in the deepening of political, social and economic relations between South American countries, a fundamental element for socioeconomic development and for the preservation of the peace in the region.

also one of the regions of the planet free of weapons of mass destruction. The conciliatory posture of Brazil, which has lived in peace with its neighbors for over a century, has historically contributed to the stabilization of the region. This legacy must be valued and preserved. Maintaining stability and prosperity in the Brazilian environment reinforces the country's security and has positive effects on all countries in South America.

The South American region has shown a low incidence of tensions or crises between states. AND

Defense plays an important role in the structure of the Organization of American States (OAS), due to its effective participation in the Board Inter-American Defense Committee (IADB), in addition to participating actively in humanitarian activities, such as acting and preparing for demining, in former conflict zones on the continent.

forums at the regional and subregional levels, such as the meetings of Chiefs of Staff and Commanders of Armed Forces; the Committee on Hemispheric Security; the Conference of Defense Ministers of the Americas; the Conference of American Armies; the Inter-American Naval Conference; and the System of Cooperation among American Air Forces.

It is important to point out that there are other

SOUTH ATLANTIC

Brazil has a special interest in the peace and security of the South Atlantic. This ocean has relevant strategic areas of vital importance for world and national trade.

The increase in incidents of piracy and theft in the Gulf of Guinea, for example, highlights the importance of strengthening the ZOPACAS, with a view to contributing to the development of the capacities of the coastal states of that Gulf to provide maritime security and stability in the region.

For this reason, it dedicates special attention to building a cooperative environment in the South Atlantic, under the aegis of the South Atlantic Peace and Cooperation Zone (ZOPACAS). The cooperation maintained within the scope of ZOPACAS extends to environmental and sustainability issues.

REGIMES AND TREATIES INTERNATIONALS WITH REFLECTIONS FOR THE DEFENSE

Brazil has a solid tradition of peaceful dispute resolution and commitment to international law. The first Brazilian republican Constitution (1891) prohibited the war of conquest and, since its debut in a global forum, in the Second Hague Peace Conference (1907), the country advocates legal equality among States, refusing discriminatory treaties and agreements.

The country's territorial disputes were resolved by diplomatic negotiations and international arbitration, which consolidated the borders with neighboring countries. Of that

In this way, Brazil anticipated the principles that motivated the creation of the League of Nations (1919) and the United Nations (1945).

INTERNATIONAL DISARMAMENT REGIMES AND NON-PROLIFERATION OF NUCLEAR WEAPONS

Brazil, in light of the constitutional principles that govern its international relations, is guided by proactive participation in negotiations involving issues of disarmament and non-proliferation. Based on the unquestionable security needs dictated by the political-strategic defense scenario, it understands that realistic and credible measures to reduce or eliminate armaments and that the transparent verification of these processes can be adopted multilaterally, providing an environment of mutual trust between sovereign States .

Brazil is one of the original signatories of the Convention for the Prohibition of Chemical Weapons and their Destruction (CPAQ), which prohibits the development, production, acquisition, storage, retention, transfer and use of this type of weaponry.

The country is party to the Convention for the Prohibition of Biological and Toxin Weapons and their Destruction (CPAB), which prohibits the development, production and stockpiling of these weapons. From the beginning

Since the 1990s, Brazil has participated, with personnel, in the demining campaigns of the Comprehensive Action Program against Mines Antipersonnel in the Americas and Africa, with significant results in terms of numbers of deactivated mines and swept areas. the country is it is also a party to the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction (Ottawa Convention). Furthermore, Brazil has been active in favoring discussions related to the prevention of the arms race in outer space, defending the adoption of a legally relevant international instrument in this matter.

As far as conventional weapons are concerned, Brazil is party to the Convention on Prohibitions or Restrictions on the Use of Certain Weapons Conventions That Can Be Considered Excessively Injurious or Injurious Indiscriminate Effects (CCAC).

SENSITIVE GOODS EXPORT CONTROL SCHEMES

Apart from all treaties relating to the non-proliferation of weapons of mass destruction, Brazil is a member of informal export control regimes in the nuclear (Nuclear Supply Group - NSG) and missile (Missile Technology Control Regime - MTCR) areas. These schemes elaborate

guidelines and negotiate lists of goods and technologies whose exports must be controlled by the member states, since they can be used in programs for the development and manufacture of weapons of mass destruction, including their means of delivery (missiles).

NUCLEAR NON-PROLIFERATION

Brazil understands that security, peace and development are inseparable dimensions issues of non-proliferation of weapons of mass destruction and disarmament. It is a field marked by strong stratification, illustrated by the differentiation made by the Nuclear Non-Proliferation Treaty (NPT) between States that possess nuclear weapons and States that do not. Possession of weapons of mass destruction (mainly nuclear) and their launch vehicles (long-range missiles), as well as participation in alliances that are based on the possibility of using – even if ultimately – such weapons, continues to be a crucial factor in international relations, with direct implications for defense and international security.

The country has consolidated credentials in the area of non-proliferation. The Federal Constitution prohibits the use of nuclear energy for

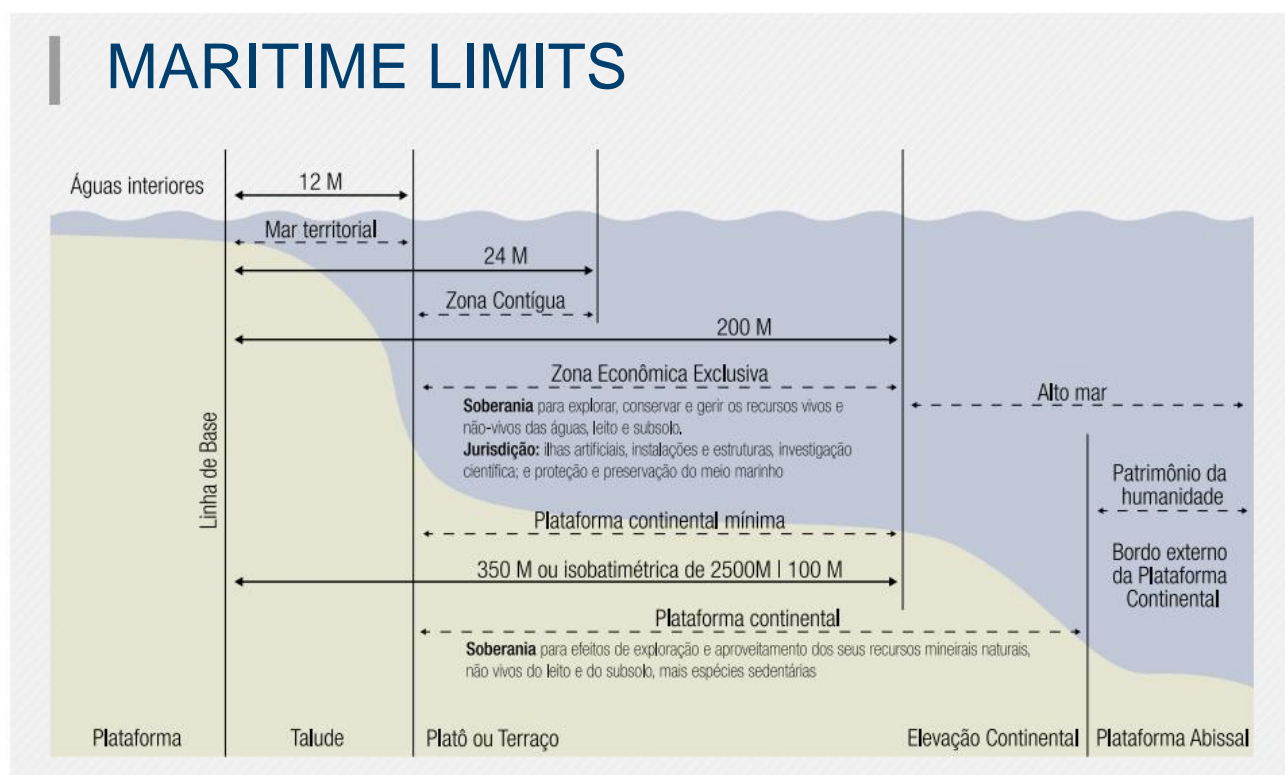
not peaceful. The arrangement formed around the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC) is unprecedented and submits the Brazilian Nuclear Program to two international organizations, the International Atomic Energy Agency (AIEA) and ABACC, which carry out their independent control, accounting and safeguarding activities.

In addition to the NPT, Brazil is party to the Treaty of Tlatelolco, which created, in Latin America and the Caribbean, the first zone free of nuclear weapons in a densely populated region of the world.

Brazil's international role in this This area seeks to reinforce national independence and ensure that international norms against the proliferation of weapons of mass destruction are not incompatible with autonomous technological training, including in strategic sectors such as nuclear.

INTERNATIONAL REGIMES FROM THE SEA, ANTARCTICA AND OUTER SPACE

MARITIME LIMITS



MARITIME AREA

The United Nations Convention on the Law of the Sea (UNCLOS), whose resolutions were ratified by Brazil, established important concepts for regulating boundaries at sea, namely: a territorial sea (MT), where the

State exercises full sovereignty; a contiguous zone (ZC), within which the coastal State can take customs, fiscal, immigration, health inspection measures and repress violations of laws and regulations committed in the territory

or in the territorial sea; and an exclusive economic zone (EEZ), in which the coastal State has sovereign rights for the purposes of exploration and exploitation, conservation and management of the natural resources.

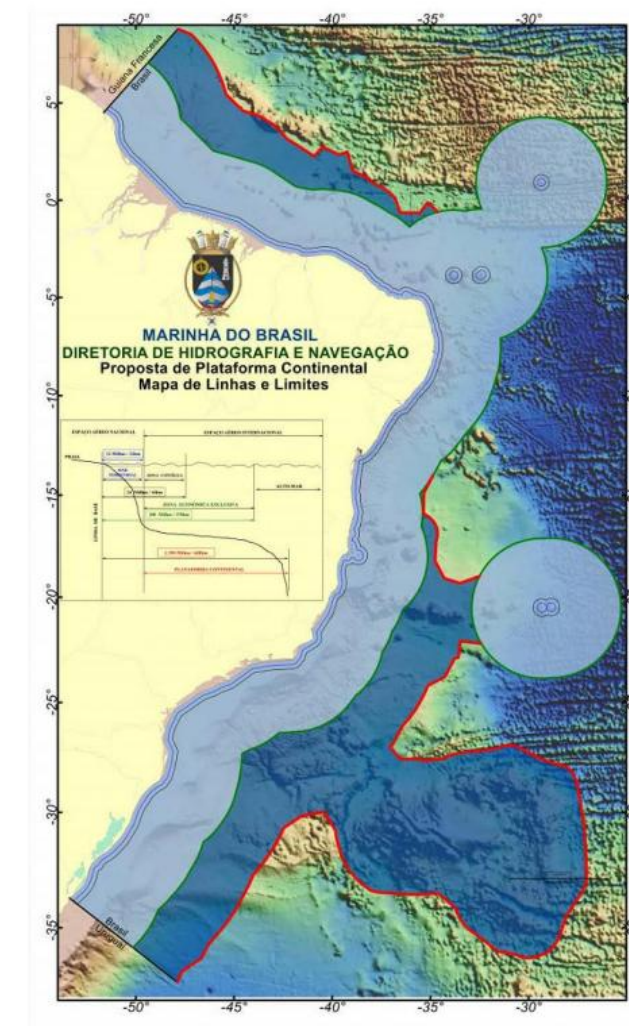
In light of the UNCLOS, the Brazilian Jurisdictional Waters comprise inland waters and maritime spaces, in which Brazil exercises jurisdiction, to some degree, over activities, people, installations, vessels and living and non-living natural resources. These maritime spaces comprise the range of 200 nautical miles counted from the baselines, plus the waters overlying the extension of the Continental Shelf beyond 200 miles sea, where it occurs.

The Brazilian EEZ comprises an area ocean area of approximately 3.6 million km², which, added to the 2.1 million km² of continental shelf (PC) located beyond 200 nautical miles and claimed by the Continental Shelf Limits (CLCS) of the UN, makes a total of approximately 5.7 million of km². This extensive oceanic area delimits the known as the “Blue Amazon”.

In 2004, Brazil submitted a submission to the CLPC requesting the extension of 965,000 km² of its continental shelf. In 2007, the CLPC accepted 81% of the request presented by Brazil for the extension of its platform and issued recommendations for the other areas. However, the Brazilian government presented a

new Revised Submission of the Outer Limit of Brazilian Continental Platform, in addition to the 200 miles, opposing those recommendations. In 2019, the CLPC made public the recommendation that legitimized Brazil to incorporate 170,000 km² of Continental Shelf area, referring to the Southern Region, in addition to the Economic Exclusive. Partial Magazine Submissions

of the Equatorial and Eastern/Southern Margins remain under analysis by the CLPC.



ANTARCTIC CONTINENT

The Antarctic Treaty System, created in 1959 with the signing of the said Treaty, regulates the entire area south of the 60° South parallel.

The System managed to build the legal regime in the Antarctic region, ensured environmental protection, scientific freedom in that area and froze, for 50 years, historical territorial disputes in that continent. The Treaty of

Antarctica, adopted at the height of the Cold War, banned nuclear tests and military operations in the region, making Antarctica the first demilitarized area on the planet.

As a result of scientific and political-strategic motivations, Brazil adhered to the Treaty in 1975. In 1982, the actions that gave rise to the Brazilian Antarctic Program (PROANTAR) began, with the attribution to the Commission

Interministerial Committee for Sea Resources (CIRM) in charge of preparing the project for the implementation of the Program, in addition to the creation of the National Commission for Antarctic Affairs (CONANTAR). The first Antarctic Operation was carried out in the summer of 1982/1983, allowing, already in 1983, the inclusion of Brazil in the group of Consultative Members of the Antarctic Treaty, today with 29 countries, ensuring the Brazilian participation in the decision-making processes related to the future of that continent.

The Navy has naval assets capable of to carry out hydrographic, oceanographic and meteorological reconnaissance in Antarctica, in addition to operating the Commander Antarctic Station Ferraz (EACF), with the support of the Brazilian Air (FAB).

OUTER SPACE

Brazil bases its foreign policy on the space area by respecting international principles related to the use of outer space, in particular: i) use of space for the benefit and interest of all humanity; ii) right to freedom of exploration of outer space, on equal terms

for all countries; iii) maintenance of international peace and security; and iv) respect for International Law and the Charter of the United Nations.

The space sector is considered, along with the cybernetic and nuclear sectors, strategic for National Defense, as established in the National Defense Strategy (END).

INTERNATIONAL REGIMES ON THE ENVIRONMENT

The environmental issue has progressive strategic importance for Brazil. The protection of natural resources gained prominence in the formulation of the National Defense Strategy, mainly with regard to the Amazon region.

Brazil guides its performance in the environmental area by the sovereign right of each nation to explore

its natural resources according to its own environmental and development policies.

The counterpart to the right of sovereign exploitation is the commitment of each State to not cause damage to the environment due to of activities carried out under its jurisdiction or under your control.

CYBER SPACE

Among the new themes that have implications for the protection of Sovereignty National is cyber defense. A

The possibility of the emergence of "cyber wars" in the 21st century represents an important challenge for National Defense and international security.

The possibility of the country suffering an attack

of cybernetic origins of the most diverse and difficult to identify origins, which could cause considerable damage to strategic structures or even to other sectors of vital importance for the Brazilian nation, makes Cyber Defense become of fundamental importance for National Defense.

WHITE PAPER OF NATIONAL DEFENSE

THE STATE
BRAZILIAN
AND THE DEFENSE
NATIONAL

CHAPTER 2

Brazil is a country of continental dimensions. In its territory and in its jurisdictional waters, it is home to a large amount of natural resources, an unparalleled biodiversity, in addition to having an outstanding world position in food production. It is a major producer of renewable and non-renewable energy, animal and vegetable protein. It has extensive reserves of drinking water, enormous biodiversity and vast

mineral resources, combined with an industrial park that is among the largest and most diversified in the world. The discoveries of pre-salt add to this potential and are taking the country to a new level of reserves and production of oil and natural gas, as well as the consolidation of its technological capacity to deal sustainably with the resources available in its vast maritime area.

It has a population of approximately 210 million inhabitants, which constitutes its greatest asset. In recent years, it has reached increasingly expressive levels of social development, seeking to eliminate poverty, increase schooling and life expectancy and reduce social inequalities.

Due to its importance in the world context and its heritage, the country cannot fail to pay due attention to its defense and to be prepared to face external, potential or manifest threats, in order to ensure the defense of the National Territory, of the Sovereignty National and national interests.

BASIC PRINCIPLES OF THE STATE

Brazil is a Federative Republic that adopts presidentialism as a system of government. The division of Powers – Executive, Legislative and Judiciary – is, in the Brazilian legal system, a fundamental principle, based on the independence and harmony of the three Powers.

The Brazilian Federation is formed by the indissoluble union of the States, the Federal District and the Municipalities. These federative entities have political autonomy, under the terms of the Federal Constitution, being able to draft laws, elect governors and manage their own resources.

The country stand on foundations constitutional rights, among which National Sovereignty stands out, understood as maintaining the Nation's intangibility, ensuring the capacity for self-determination and coexistence with other Nations in terms of equal rights, not accepting any form of intervention in internal affairs, nor participation in acts of this nature in relation to

to other Nations.

In the international sphere, Brazil acts in

accordance with the principles listed in art. 4 of the Constitution.

Federal, among which stand out as of greatest interest to National Defense: national independence, prevalence of human rights, self-determination of peoples, non-intervention, equality between States, defense of peace, peaceful resolution of conflicts, repudiation of international terrorism and racism and cooperation among peoples for the progress of humanity.

Brazilian foreign policy considers international dialogue and cooperation to be essential instruments for overcoming obstacles and for approaching and strengthening trust between States. In geopolitical terms, Brazil prioritizes its strategic surroundings, consisting of South America, the South Atlantic, the west coast of Africa and Antarctica.

Due to traditional relationships, North America and Europe are also areas of interest. As a result of historical and cultural ties, Portuguese-speaking countries deserve special attention in the field of Defense cooperation.

Likewise, the proximity of the Caribbean Sea and Central America demands increasing attention to



TERRITORY

Located in South America, the Brazilian territory has about 8.5 million km² of land area and 4.5 million km² of jurisdictional waters.

The country borders 9 countries in the south Americans and an overseas territory of France, which represents a line with 16,866 km in length. According to art. 20 of the Federal Constitution, the portion of 150 km, counted from the border line, is designated as a

border, considered fundamental for national defense and represents 27% of the national territory.

Brazil's natural maritime vocation is supported by its extensive coastline, with about 7,400 km, its waterways, the magnitude of its maritime trade and the undeniable strategic and economic importance of the Atlantic

South, which incorporates a high potential of living and non-living resources, such as the largest reserves of oil and natural gas in Brazil.

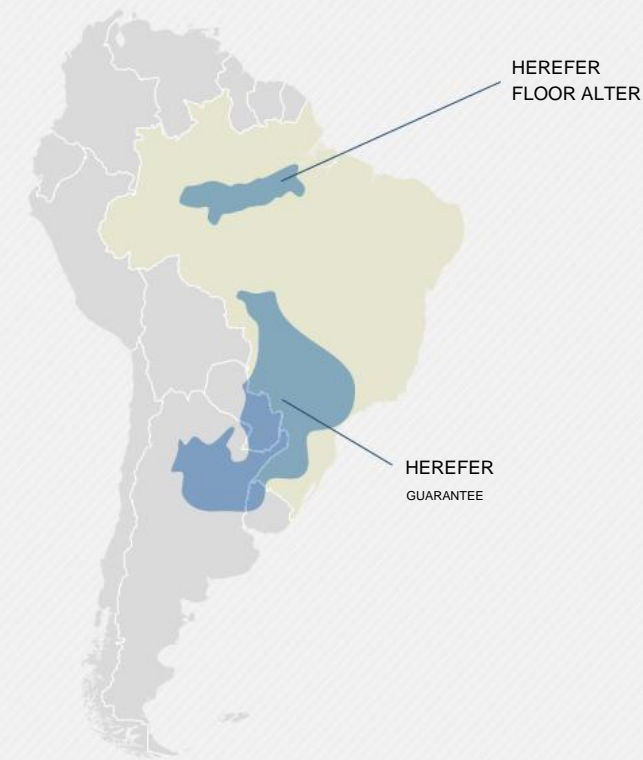
SOUTH AMERICA MAP



aquifers FLOOR ALTER AND GUARANI

On a planet threatened by the growing scarcity of natural resources, Aquifers Alter do Chão and Guarani are among the largest underground freshwater reserves in the world. The Alter do Chão Aquifer, located under the largest hydrographic basin in the world (Amazon River), extends under Brazilian soil, with a potential volume estimated at 86,000 km³. About 70% of the Guarani Aquifer is located in Brazilian territory (840,000 km²), with an underground water reservoir with an estimated capacity of 45,000 km³.

NATIONAL TERRITORY



The National Territory is made up of five major regions, with their own characteristics: North, Northeast, Midwest, Southeast and South.

The North region is equivalent to more than 45% of the National Territory and is characterized, among other elements, by having a low population density and an extensive border strip. The Amazon, with over 4 million km², represents one of the areas of greatest interest for defense.

The Pan-Amazon, equivalent to the entire Amazon in South America, corresponds in approximate numbers to 40% of the South American continental area and holds 20% of the world's availability of fresh water. The largest portion of the Amazon extension belongs to Brazilian territory (about 70%), it is home to mineral reserves of all kinds and the greatest biodiversity on the planet.

The Northeast is the second most densely populated geographic region, impacted by the drought phenomenon and with its population concentrated along the coast, where the main urban centers are located. The Midwest, an area of expansion of the agricultural frontier, also has a reduced population density.

The Southeast is the most densely populated, urbanized and developed region in the country, encompassing the largest population centers. The southern region is the one with the smallest territorial extension. borders with the platinum countries and presents high rates of urbanization and demographic density.

With regard to the border strip, the finding of significant population growth and the densification of urban centers along this area justify the priority given to sustainable development, national integration and cooperation with bordering countries, with regard to security and

combating transnational crimes.

In all geographic regions, predominantly in the Southeast and South regions, structures of strategic value are located for the country, in the sectors of energy, telecommunications, transport and logistics, constituting important points of defense.

The Brazilian waterway network is a factor vital for national integration. The country is home to 12 large hydrographic basins. Four main ones stand out: to the north, the Amazon; in the center, those of Araguaia-Tocantins and São Francisco; and, to the south, the Paraná, Paraguay and Uruguay sub-basins, which make up the Prata basin. There is great potential for articulated actions that facilitate intermodal transport, as a factor for occupation of the interior and national integration, with direct consequences for integration

from South America.

Brazil has a strong connection with the sea, which makes it exert a natural influence on the South Atlantic. The strong dependence on maritime traffic for foreign trade activities

constitutes a relevant challenge for the defense.

The South Atlantic region over which Brazil exercises sovereignty and jurisdiction in matters related to the exploration and control of jurisdictional waters and the continental shelf has an area equivalent to that of the Brazilian Amazon, which is why it is called the "Blue Amazon". This region shelters oil and gas reserves in deep and ultra-deep waters, which are so important for the development of the country. Hence the need

to intensify follow-up, monitoring and control measures for maritime traffic, as well as incidents in the surveillance area

shipping under the responsibility of Brazil.



POPULATION AND CULTURE

Brazilian society is the result of the meeting populations of diverse geographic and ethnic origins. Since the beginning of colonization, individuals of Amerindian, European and African origin mixed, resulting in a mixed population. At the end of the 19th century and beginning of the 20th century, Brazil received new migratory flows from the most diverse origins,

mainly European, middle eastern and orientals, increasing miscegenation and producing great brands in Brazilian culture.

During the twentieth century, there were intense

internal migratory movements, associated with socioeconomic factors and policies to encourage the occupation of the territory.

The economic cycles constituted poles of attraction of migrants to different regions. The population increase in the North region of Brazil, for example, was driven by the extraction of rubber at the end of the 19th century.

Subsequently, the industrialization process established the Southeast region as the main destination for population movements. The census carried out in 2010 showed, however, that the

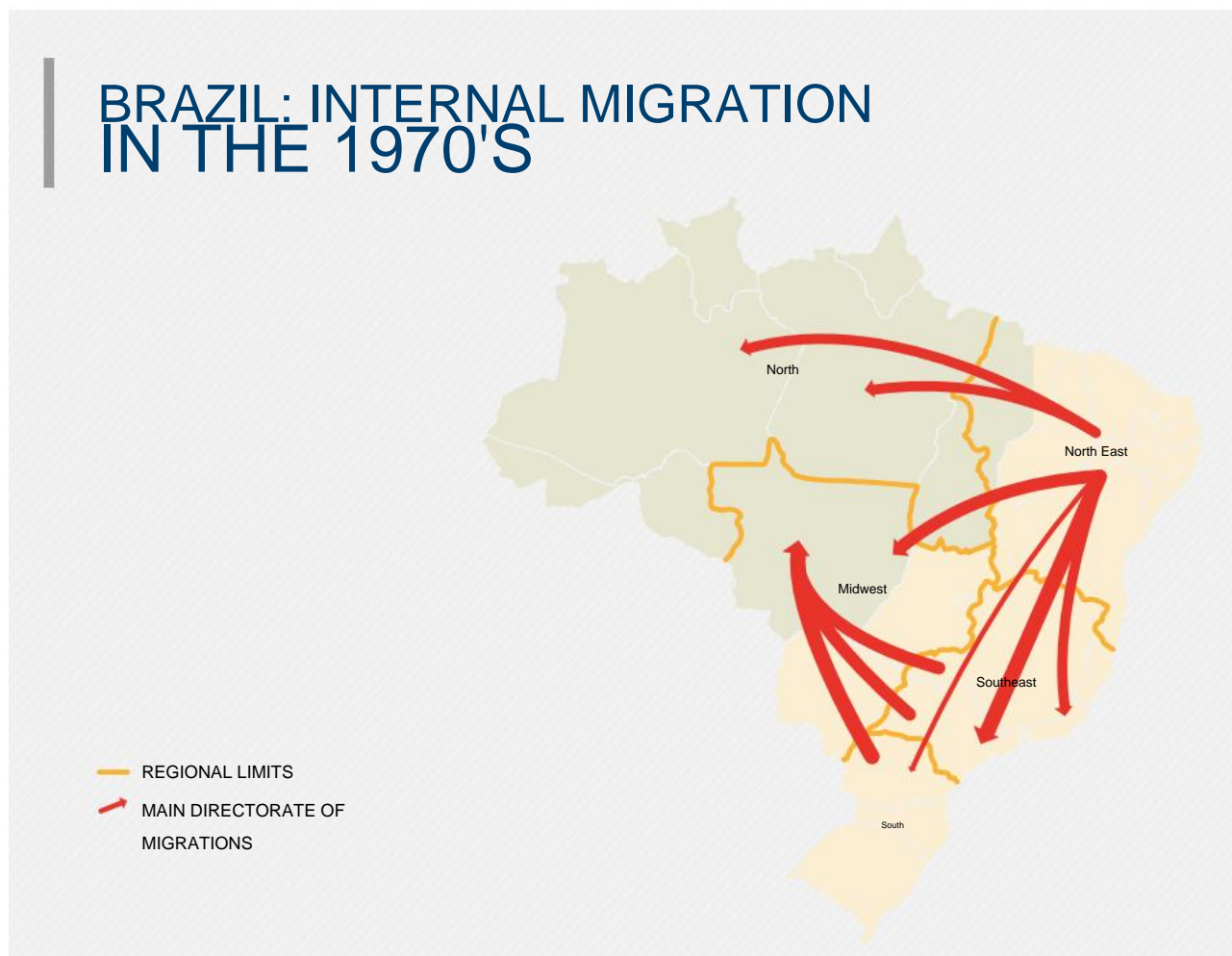
The intensity of migration to the cities of the Southeast has decreased, mainly due to the decentralization of industrial activity.

Today, we see the emergence of development centers and job offers in different regions.

Parallel to these “spontaneous” migratory flows, the State promoted actions to encourage the occupation of sparsely populated areas, with a view to their integration into the National Territory. The so-called “March to the West”, for example, was a movement created by President Getúlio Vargas's first period of government (1930-1945) to motivate the occupation of the Midwest region. Subsequently, the change of the capital of the

Country for Brasilia constituted a landmark of territorial occupation.

Miscegenation, Lusitanian, indigenous and African heritage and the harmonious interaction of different cultures were responsible for its own and original identity. The official Brazilian language, Portuguese, is one of the main foundations of national identity and a vector transmission of culture and traditions. Music, the arts, literature and sports are elements that have also contributed to the process of forming a national identity. These elements encompass local characteristics, sayings and knowledge, contributing to the development of a cultural richness.



NATIONAL DEFENSE

NATIONAL DEFENSE POLICY AND STRATEGY

One of the most important attributions of the State is to provide the security and defense necessary for society to develop and achieve its goals. It implies providing and guaranteeing conditions so that the country does not run the risk of suffering external aggression, nor is it exposed to political pressures or undesirable economic impositions and is capable of freely devoting itself to its own development and progress. An adequate defense structure guarantees greater stability for the country and, thus, a favorable environment for the Brazilian State to achieve its objectives.

fundamentals presented in art. 3 of the Federal Constitution.

Brazil exercises complete and exclusive sovereignty¹ over its territory, its territorial sea and the overlying airspace, not accepting any form of external interference in its decisions. The Brazilian State works in favor of actions that strengthen rapprochement and trust between countries, since the appreciation and exploitation of this perspective represent a contribution to the prevention of disputes capable of potentiating threats to national security.



PND and NDT | Ministry of Defense/Disclosure

¹ Sovereignty is the first foundation cited in art. 1 of the Brazilian Federal Constitution. Sovereignty is inalienable, indivisible and imprescriptible. It must be exercised by the general will and be preserved in the name of future generations and the prosperity of the country. It is a supreme order, which must not submit to another order.

THE NATIONAL DEFENSE POLICY (PND)

The PND is the conditioning document of more high level for planning actions aimed at the defense of the country. Focused primarily on external threats, it establishes objectives for the preparation and use of all expressions of National Power, in favor of National Defense.

National Defense is the set of attitudes, measures and actions of the State for the defense of the National Territory, sovereignty and national interests against predominantly external, potential or manifest threats".

Brazil conceives its National Defense, according to basic assumptions, among which the following can be highlighted:

The. to prepare the Armed Forces, keeping them in a permanent state of readiness to be employed, in order to fulfill their constitutional purpose and to provide adequate deterrence capacity;

B. seek financial budget regularity for the Defense Sector;

w. seek to maintain the South Atlantic as a zone of peace and cooperation;

d. promote the protection of the Brazilian Amazon;

It is. favoring cooperation at the international level;

f. act under the aegis of international organizations, in accordance with the commitments assumed in conventions, treaties and

international agreements and always respecting constitutional principles;

g. participate in international organizations;

H. participate in international operations, aiming to contribute to world stability and the welfare of peoples;

i. advocate the exploration of Antarctica solely for the purposes of scientific research;

j. support initiatives for the complete elimination of chemical, biological, radiological and nuclear weapons;

k. repudiate any intervention in the sovereignty of States and defend that any action in this sense be carried out in accordance with the dictates of the international legal order; It is

l. encourage the fundamental involvement of all segments of Brazilian society in defense matters, for the development of a participatory culture and collaboration of all citizens.

As a result of the analysis of environments national and international projections and their projections, as well as the political Conception, the National Defense Objectives (OND) are established, which must be interpreted as the conditions to be achieved and maintained permanently by the Brazilian nation in the

scope of Defense. Are they:

n OND 1 – Guarantee sovereignty, heritage

national and territorial integrity;

n OND 2 – Ensure the defense capacity, for the fulfillment of the constitutional missions of the Armed Forces;

n OND 3 – Promote technological and productive autonomy in the area of defence;

n OND 4 – Preserve cohesion and unity national;

n OND 5 – Safeguard people, property,

national resources and interests situated abroad;

n OND 6 – Expand society's involvement Brazilian in matters of National Defense;

n OND 7 – Contribute to regional stability and to international peace and security;

n OND 8 – Increase Brazil's projection in the concert of nations and its insertion in international decision-making processes.

THE NATIONAL DEFENSE STRATEGY (END)

The END guides the segments of the Brazilian State regarding the measures that must be implemented so that these objectives are achieved. It is, therefore, the link between the country's position on Defense issues and the actions necessary to effectively endow the state with the capacity to meet its interests.

Based on the PND, the END defines, clearly and objectively, the strategies that should guide Brazilian society in actions of defense of the Fatherland. It deals with the basics of which the country's defense should be structured, as well as indicates the articulations that should be conducted, within the scope of all instances of the three Powers and the interaction between the different levels conducting these actions with the non-governmental segments of the Country.

It also presents the national capacities of defense² adequate to ensure the effectiveness of the national defense, both in peacetime and of conflict.



Arrival of the PHM "Atlântico" | Air Force Magazine/Alexandre Durão

² The END lists, as examples of Defense Capabilities: Protection, Prompt response, Deterrence, Coordination and Control, Information Management, Logistic Capacity, Strategic Mobility, Mobilization and Defense Technological Development; in their joint dimensioning, they allow to generate a deterrent effect against threats and preserve the country's national interests, in a determined time horizon.

FOREIGN AND DEFENSE POLICIES

Foreign and defense policies are complementary and inseparable. The maintenance of regional stability and the construction of a more cooperative international environment, of great interest to Brazil, will be favored by the joint action of the Ministries of Defense (MD) and Foreign Affairs (MRE).

The articulated participation of military personnel and diplomats in multilateral forums increases the ability of foreign and defense policies to defend Brazilian interests abroad. This combined action should aim at the diversification of strategic partnerships, cooperation and military exchange with the Armed Forces of friendly nations, in order to strengthen relations between countries.

Endowed with an effective defense, mainly with an adequate capacity of deterrence, Brazil will be able to inhibit possible aggressions to its territory and its population and to defend its interests. At the same time, the growing cooperation with South American nations in defense matters will help to avoid possible tensions or crises between the States of the region and will contribute to the maintenance of a peaceful environment in the Brazilian strategic environment. Through dissuasion and cooperation, Brazil will thus strengthen the close link between its defense policy and its foreign policy.

Faced with these challenges, the importance of implementing the National Defense Policy (PND) and the National Defense Strategy (END) is enhanced, through coordinated actions between different government agencies.



Tereza Sobreira

WHITE PAPER OF NATIONAL DEFENSE

THE DEFENSE AND THE
INSTRUMENT
MILITARY

CHAPTER 3

States, not infrequently, can find themselves in situations of clash of interests with other National States, characterizing a conflict. Primarily, the solutions to conflicts must occur through political, diplomatic or legal channels. However, the failure or delay in the solution, can escalate the conflict to an international crisis situation, which if characterized as a political-strategic crisis, which involves, for example, some kind of threat to National Sovereignty or the integrity of national heritage, can reach levels of confrontation.

Sometimes the steps described may be overlap or progress more rapidly. In case of evolution to a conflict situation, or even before, it will be up to the Brazilian State, in accordance with the established

in article 21 of the Constitution, to ensure the defense of the Country, which will thus employ the National Power, for the defense of the National Territory, of the Sovereignty and national interests.

The military instrument that Brazil has for its defense consists of the Armed Forces, composed of the Brazilian Navy, the Brazilian Army and the Brazilian Air Force, institutions that must have the capacity to contribute effectively to the national defense effort, maintaining become modern, compatible with the country's political-strategic stature and permanently ready to be employed. The Ministry of Defense and the three Singular Forces

composes the so-called **Defense Sector**.

constitutional powers and law and order. They are subordinate to the Minister of State for Defense which exerts the superior direction of the Forces. Each one has a Commander, appointed by the Minister of Defense and appointed by the President of the Republic, who, within the scope of his attributions, directs and manages the respective Force.

Brazilian legislation also establishes that it is up to the Armed Forces to carry out subsidiary attributions to cooperate with national development, civil defense and other specific purposes. The contribution to national development occurs not only through direct actions, but in promoting research and the development of various technologies, whether in its own scientific, technological and

innovation (ICT), or in conjunction with the Defense Industrial Base (BID) installed in the country, with a relevant participation in the national Gross Domestic Product (GDP), due to the high added value of its products. Cooperation with civil defense takes place when disasters occur in which the support of the Armed Forces to bodies specialized in these operations becomes fundamental for the adequate and necessary assistance to the population in emergency situations.

It is also up to the Armed Forces, preserving the exclusive powers of the judicial police, acting against crimes along the land border, in the airspace, at sea and in inland waters and in coordination with other bodies of the Executive Branch, in accordance with the specific attributions of the Navy, Army and Air Force .

MISSION OF THE SECTOR OF DEFENSE

Prepare the Armed Forces, keeping them in a permanent state of readiness to be used in the defense of the Homeland, in the guarantee of the constitutional powers, in the guarantee of the law and the order; in the fulfillment of subsidiary attributions; and in support of foreign policy; in order to contribute to the national defense effort".

The Armed Forces, as established in article 142 of the Federal Constitution, are permanent and regular national institutions, organized based on hierarchy and rank.

discipline, having its own structures, under the supreme authority of the President of the Republic, who is the Supreme Commander, and are intended for the defense of the homeland, the guarantee of

THE MINISTRY OF DEFENSE

The Ministry of Defense (MD) was created on June 10, 1999, replacing the General Staff of the Armed Forces and the Military Ministries. The former Ministries of Forces were transformed into Commands of the Navy, Army and Air Force, which are commanded by General Officers in the highest positions in the military career: Admiral

of the Squadron, General of the Army and Lieutenant Brigadier of the Air, respectively.

The Ministry of Defense and the Armed Forces exercise competence over a wide range of subjects, some of which are of great sensitivity and complexity for the Brazilian nation. Their areas of competence are:

- nn National Defense Policy (PND), National Defense Strategy (END) and Book National Defense White (LBDN);
- n defense and military sectoral policies and strategies;
- n preparation and employment of the Armed Forces;
- n special projects of national defense interest;
- n defense intelligence;
- n military operations of the Armed Forces;
- n international defense relationship;
- n defense budget;
- n defense legislation;
- n national mobilization and defense logistics;
- n military education and defense studies;
- n defense science, technology and innovation;
- n social protection of military personnel Armed;
- n investment, financing, development and promotion of the defense industrial base;
- n purchase, contracting, development, business intelligence, import and export of defense products;
- n Action by the Armed Forces, when applicable: in guaranteeing law and order, in guaranteeing voting and electoral counting, in cooperation with development national and civil defense and in the fight against cross-border and environmental crimes;
- n military service;
- n health and social and religious assistance in Armed forces;
- n military sport;
- n constitution, organization and staff of Armed forces;
- n national maritime policy;
- n safety of waterway navigation, safeguarding human life at sea and preventing water pollution;
- n real estate assets managed by Armed forces;
- n regulation of activities related to controlled products of national defense interest;

- n aeronautical military policy and action in national aerospace policy;
- n safety of air navigation;
- n aerospace infrastructure; It is
- n Amazon Protection System.

The MD is also a responsible political actor for fostering cooperation with other government sectors that are related to the country's defense, aligning defense projects with programs developed by other areas of the government, mainly linked to national development and diplomacy.

THE MINISTRY OF DEFENSE AND THE PREPARATION AND EMPLOYMENT OF THE ARMED FORCES

Complementary Law No. 97, of June 9, 1999, establishes that it is up to the Commanders of the Navy, Army and Air Force to prepare their operating and support bodies, obeying the policies established by the Minister of State for Defence.

Preparation is understood as the activities of planning, organization and articulation, instruction and training, development of doctrine, scientific research, intelligence and structuring of the Armed Forces, its logistics and national mobilization.

The use of the Armed Forces in the defense of the Homeland, in the guarantee of constitutional powers, law and order, and in the participation in peacekeeping operations is the responsibility of the President of the Republic, who will determine to the Minister of State for Defense the activation of operational bodies .

The President of the Republic, as Supreme Commander of the Armed Forces, is advised by the Military Defense Council with regard to the use of military means. With regard to other matters pertaining to the military area, by the Minister of Defense.

The Military Defense Council (CMiD) is composed of the Commanders of the Navy, Army, Air Force and the Chief of the Joint Chiefs of Staff of the Armed Forces. When advising the President of the Republic blica, with regard to the use of military means, is presided over by the Minister of Defence.

It is also incumbent upon the Council, as part of the Defense Military Structure, to advise the President of the Republic regarding the use of military means and advise the Minister of Defense, in the competences provided for in item III, of art. 3, of Decree No. 7,276 of August 25, 2010.

ORGANIZATIONAL STRUCTURE OF THE MINISTRY OF DEFENSE

The main mission of the Defense Sector of preparing the Armed Forces, keeping them in conditions to be employed, gave rise to a structure for the Ministry of Defense (MD) that to allow its effective performance in this process. Thus, within the scope of the MD's central administration, for this purpose, the Joint Chiefs of Staff of the Armed Forces (EMCFA) stands out.

Joint Chiefs of Staff of the Armed Forces (EMCFA)

It is incumbent upon EMCFA to draw up plans for the joint use of the Armed Forces and advise the Minister of State for Defense on coordination, the EMCFA has a committee made up of the Chiefs of Staff of the Single Forces. The Joint Chiefs of Staff Armadas is structured into three Headships, whose holders are General Officers of the last post, active.

The EMCFA plays a key role in execution of the National Defense Strategy, as it is responsible for coordinating interoperability programs with the aim of optimizing military resources in the country's defense, border security and humanitarian and rescue operations.

The position of Chief of the Joint Chiefs of Staff of the Armed Forces is restricted to a General Officer of the last rank, active or in the reserve, appointed by the Minister of Defense and appointed by the President of the Republic. under your

Head of Joint Operations (CHOC)

Its competence is the planning and monitoring of operations and joint exercises of the Armed Forces. involves the dimensioning of joint means of defense, formulation and updating of doctrine and strategic plans for employment



set of Armed Forces. Monitors the use of joint or individual Operational Commands, proposes guidelines, plans, coordinates and monitors the performance of the Armed Forces in

Head of Strategic Affairs (CAE)

Its responsibility is to monitor the political-strategic conjunctures related to National Defense. Participates in representations in organizations in Brazil and abroad. That Management has close contact with the Ministry of Foreign Affairs; with the Representation

Head of Logistics (CHELOG)

Its responsibility is to promote the integration process and logistical interoperability between the three Armed Forces, coordinating the planning, execution and monitoring

operations for the guarantee of law and order, in peace operations, in subsidiary actions and in actions in support of civil defense.

Brazilian at the Inter-American Defense Board (RBJID); with the Military Advisers in New York and Geneva; and with the Addicts for the Defense of Brazil Abroad. He also advises the Minister of Defense on proposals for cooperation with other countries.

of programs and projects aimed at logistical integration, military and national mobilization, joint operations, the Articulation and Defense Equipment Plan (PAED).

WAR SUPERIOR SCHOOL (ESG)

A member of the Structure of the Ministry of Defence, ESG operates in the sphere of higher studies and research in the area of national development and defense.

Qualified as a Scientific Institution, Technology and Innovation, aims to develop and consolidate knowledge necessary for the exercise of advisory and directing functions, and for national security planning at the government level,

transmitting to civilians and military a knowledge

wide coverage of Brazilian problems.

In addition to its academic activities, ESG It counts on the support and contribution of the Association of Graduates of the Escola Superior de Guerra (ADESG) to disseminate, nationwide, the School's thinking and production of knowledge. With operations in more than 100 Brazilian municipalities, ADESG is a relevant partner in the challenge of taking the debate on defense to the

other sectors of Brazilian society.

STRATEGIC SECTORS FOR DEFENSE

The National Defense Strategy listed three sectors as strategic: nuclear, cybernetic and space. The Ministerial Directive of MD nº 14/2009 determined that the nuclear sector would be under the coordination of the Navy,

the cybernetic with the Army and the space sector with the Air Force. In the three sectors, the priority is to increase the country's scientific and technological capacity and prepare human resources.

The Nuclear Sector

Brazil is among the main countries who dominate nuclear technology, highlighting applications in power generation and in medical and industrial areas. holds knowledge of the entire fuel production process and has uranium deposits in sufficient quantity for its own needs.

nuclear power plant, and currently supplies fuel processing centrifuges to Indústrias Nucleares do Brasil (INB). An essential part of the Navy's Nuclear Program is the construction of the reactor for the Brazilian conventional nuclear-powered submarine, which will considerably increase the defense capacity of the

Its main objective is the consolidation and technological autonomy of the nuclear industry as a cutting-edge segment, essential for development. The use of nuclear technology in Brazil is aimed exclusively at peaceful applications. It should also be noted that the Brazilian nuclear industrial park is qualified as an international reference, especially in relation to the area of safety and protection of facilities, as well as in the control of tailings.

Brazil in the South Atlantic.

It is important to emphasize that only the propulsion of the submarine will be nuclear, which is expressly permitted by the agreement signed with the International Atomic Energy Agency (IAEA). All of its weapons will be conventional, due to Brazil's constitutional commitment to the peaceful use of this energy, reaffirmed in international instruments such as the NPT; regional, such as

The Navy, since 1979, contributes to the Brazilian Nuclear Program, having achieved total mastery over the fuel cycle

Treaty of Tlatelolco; and bilateral, such as Brazil Argentina – ABACC.

The Cyber Sector

The Cybernetic Sector welcomes the areas operations and science and technology. Under the

coordination of the Army, significant advances have been achieved in the training of personnel

expertise and the development of high-tech solutions.

The protection of cyberspace covers a wide range of areas, such as training, intelligence, scientific research, doctrine, operational training and employment, and personnel management. It also includes the protection of its own assets and the ability to operate in a network.

The Cyber Defense Command (ComDCiber), joint military organization, in the organizational structure of the Command of the Army, activated in 2016, joins forces with other government organizations and has as its main attributions: planning,

guide, supervise and control operational, intelligence, doctrinal, science and technology activities, as well as training in the Sector Defense Cyber.

The bodies subordinate to ComDCiber are the Cyber Defense Center (CDCiber) and the National School of Cyber Defense (ENaDCiber). The first has the purpose of carrying out operational and intelligence activities within the scope of the Military Cybernetic Defense System, while the School in question has the mission of promoting and disseminating the skills necessary for Defense Cybernetics in the scope of National Defense.

The Space Sector

The main objective of the Brazilian Space Program (PEB) is the development and subsequent use of space technologies to solve national problems, with tangible benefits for Brazilian society. Space projects promote the scientific and technological development of institutions dedicated to research and development (Instituição Científica e Tecnológica – ICT) and industries in the aerospace sector, thus strengthening aerospace power, scientific research, innovation, national launch operations and technological services in aeronautical, space and defense systems. Achieving the ability to develop

technologies with high added value is reflected in the country's economic development and currently assumes a strategic role that, in turn, contributes to expanding Brazil's role in the geopolitics of nations internationally more influential.

Among the main programs and projects within the scope of the Brazilian Space Program, the following stand out:

• Brazilian Satellite Launch Vehicle (VLS-1): design of a Brazilian vehicle, under development by the Institute of Aeronautics and Space (IAE), of the Brazilian Air Force;

• Microsatellite Launch Vehicle (VLM-1):

project for a Brazilian launch vehicle, under development by the Instituto de Aeronáutica e Espaço (IAE), of the Brazilian Air Force, capable of delivering special payloads or microsattellites (up to 150 kg) in equatorial and polar or re-entry orbits.

VLS and VLM are the main projects space and therefore require greater financial investment and human resources highly trained.

n Geostationary Defense Satellite and Communications (SGDC): joint project of the Ministry of Defense and the Ministry of Science, Technology and Innovations and Communications. The objectives: provide internet coverage for 100% of the Brazilian territory; provide secure and sovereign means for Strategic and Defense Communications; and acquire critical space technologies through technology transfer and absorption programs.

The Aeronautics and Space Institute (IAE), subordinated to the Aerospace Science and Technology Department (DCTA), of the Air Force Command, develops space activities in the segment of access to space.

The Launch Centers of Alcântara (CLA) and Barreira do Inferno (CLBI), located in the states of Maranhão and Rio Grande do Norte, respectively, are organizations of the Command

of Aeronautics, subordinated to the Department of Aerospace Science and Technology (DCTA). They operate in launch missions and tracking of aerospace devices, as well as in the collection and processing of data from their payloads, including tests and scientific experiments of interest of the Air Force related to the Policy National Aerospace Development.

The Strategic Space Systems Program (PESE) is a plan essentially focused on the implementation of fundamental infrastructure for the National Defense Strategy, and its justification is essentially due to the unique strategic military capabilities that the program brings. However, given its dual nature, this

infrastructure should also be intensely used in civilian applications, bringing many significant benefits to the government and the wider society, even in peacetime.

In the field of Defense, the program will provide the necessary space infrastructure for the operation of several strategic projects, such as management systems Blue Amazon (SisGAAz), Border Monitoring (SISFRON), Brazilian Aerospace Defense (SISDABRA), Amazon Protection (SIPAM), among others. This infrastructure should also be intensely used in support of police actions and inspection of the most varied illicit acts, contributing strongly to the reduction of violence and illicit acts in the country.

MONITORING AND CONTROL SYSTEMS

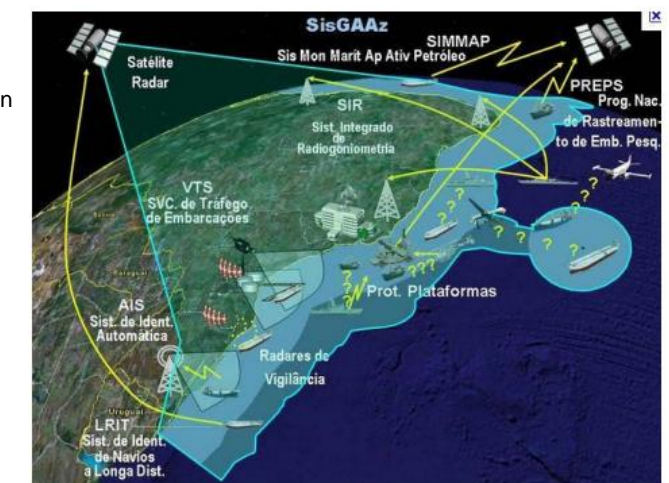
Blue Amazon Management System (SisGAAz)

SisGAAz was designed to be the main Navy command and control system.

Provides for the management of activities related to the sea that involve surveillance, monitoring, prevention of pollution, natural resources, among others, related to the concept. Everything related to international concept of maritime security and for the protection of the Brazilian coast.

The System aims at the effective understanding of everything associated with the marine environment that can impact defense, economy and the environment in Brazilian Jurisdictional Waters (AJB). The expansion of this awareness adds depth to this defense by enabling monitoring and

threat control as short and distant as possible. This anticipation, combined with the mobility and presence of the Brazilian Naval Power, will enable the defense of the AJB.

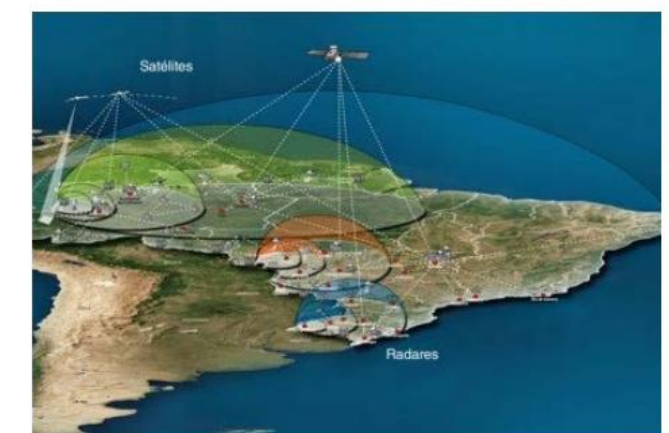


Integrated Border Monitoring System (SISFRON)

SISFRON will allow the Army to maintain the monitored borders and promptly respond to any threat or aggression, especially in the Amazon region.

The perspective is to interconnect SISFRON with the similar systems of the other Forces, the Ministry of Defense and other federal agencies, evolving into an integrated monitoring system, with a vision of use in an interagency environment, which will contribute to unified initiatives that favor the development regions sustainable

border crossings and the fight against cross-border crimes.



Brazilian Airspace Control System (SISCEAB)

SISCEAB's mission is to provide the safety and fluidity of air traffic, as establish national standards and agreements and international treaties to which Brazil is a signatory. Its central body is the Airspace Control Department (DECEA), which is responsible for planning, standardizing and managing the SISCEAB and carrying out airspace control and for the provision of Air Navigation Services (ANS), such as: Flight (AIS), Air Traffic Management (ATM), Search and Rescue (SAR), Communication, Navigation and Surveillance (CNS), in addition to activities related to Aeronautical Meteorology, Aeronautical Cartography, Aeronautical Telecommunications and In-flight Inspection.

The System, which has responsibility for a total area of 22 million km², is

Brazilian Aerospace Defense System (SISDABRA)

SISDABRA's central body is the Aerospace Operations Command (COMAE), which is an Operational Command Joint, being, in time of peace, directly subordinate to the Commander of Air Force and, when in a conflict situation, to the Supreme Commander.

Its mission is to carry out aerospace defense of the national territory against all forms

divided into five major control areas that are managed by four Integrated Centers for Air Defense and Air Traffic Control (CINDACTA), headquartered in the cities of Brasilia (DF), Curitiba (PR), Recife (PE) and Manaus (AM), in addition to the Regional Flight Protection Service (SRPV), located in São Paulo (SP).

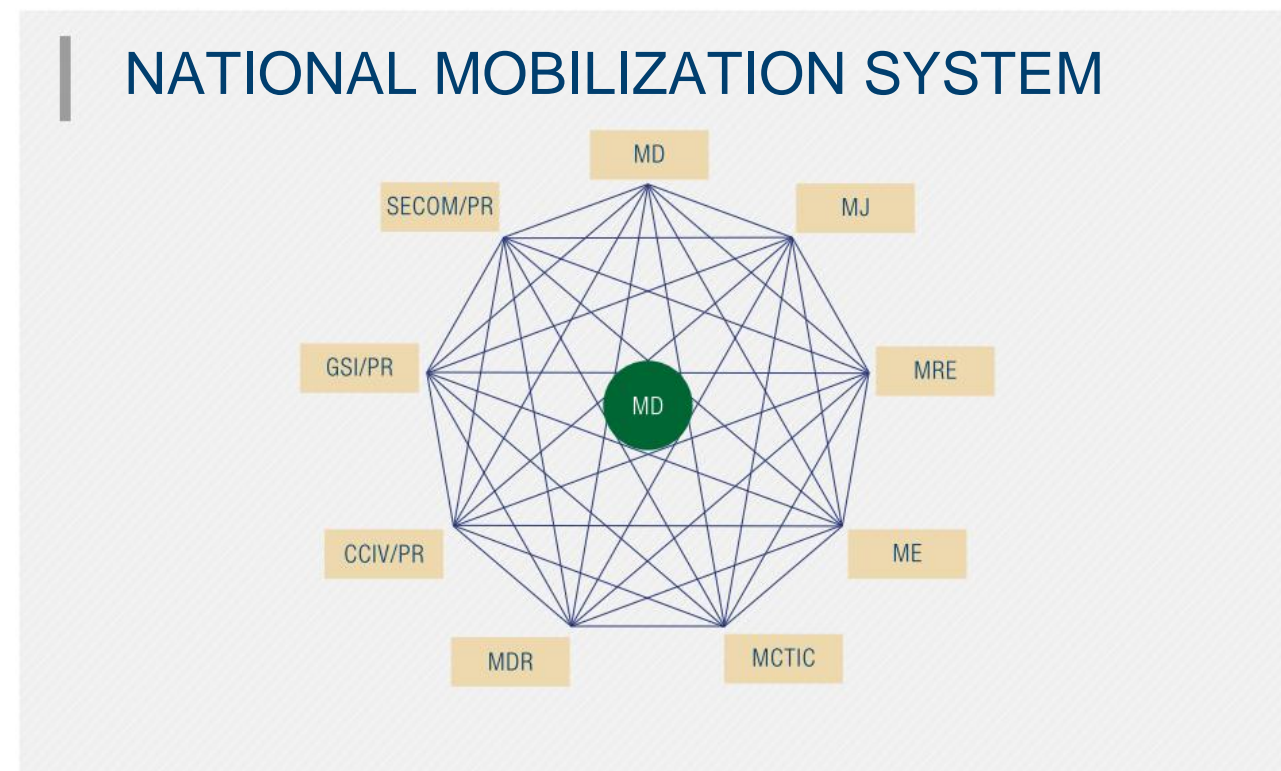


of threat, in order to ensure the exercise of sovereignty in the Brazilian Airspace; employ the means under its operational control, including those necessary for the establishment of procedures to be followed in relation to hostile aircraft or those suspected of trafficking in narcotic substances and similar drugs; and plan, coordinate, supervise, control and perform the employment of aerospace power.

NATIONAL MOBILIZATION

The National Mobilization provides the expansion of the combat power of the Armed Forces with the increase in human, material and service resources, complementing Military Logistics.

National Mobilization System (SINAMOB)



SINAMOB consists of a set of bodies that act in an orderly and integrated manner, in order to plan and carry out all phases of Mobilization and Demobilization National, and must ensure the integration of the capabilities of the Executive, Legislative and Judiciary, within the scope of the Union, the States, the

Federal District and Municipalities, enabling guidance and coordination with maximum efficiency, stimulating the flow of information between its constituent bodies. The Ministry of Defense (MD), as the Central Body, has the purpose of guiding, supervising and conducting the System activities.

Military service

The Military Service is an essential element for the mobilization of the Brazilian people in defense of national sovereignty. In Brazil, it is mandatory for male citizens, with the possibility of remaining in active service for up to eight years.

In Brazil, around 1.85 million young men annually reach the age group destined to provide military service, and approximately 90,000 join the Armed Forces.

DEFENSE INTELLIGENCE SYSTEM (SINDE)

The Ministry of Defense is part of the System Brazilian Intelligence Agency (SISBIN), which should subsidize the Brazilian Intelligence Agency (ABIN) with specific data and knowledge related to the defense area.

In this sense, in 2002, it was instituted, within the of the Ministry of Defense and the Singular Forces, the Defense Intelligence System (SINDE), with the objective of integrating the actions of planning and execution of the defense intelligence activity.

BRAZIL'S NAVY

The origin of the Brazilian Navy dates back to July 28, 1736, when, by charter of D. João V, king of Portugal, the Secretary of State for the Affairs of the Navy and Overseas Domains was created, a body directly subordinated to the monarch and responsible for managing the human and material resources necessary for the full operation of a Navy.

In 1808, as a result of the Napoleonic invasions, the Portuguese Royal Court moved to Rio de Janeiro; so the

prince regent, D. João VI, appointed D. João Rodrigues de Sá e Menezes, Count of Anadia, head of that Secretariat, formalizing his transfer to Brazil.

In 1821, before his return to Portugal, D. João VI appointed the head of the squadron, Manoel Antônio Farinha, as Secretary of State for the Division of the Navy in the then Kingdom of Brazil.

Even before the Declaration of Independence, on September 7 of the following year, a naval force, identified with the process of

political emancipation acted, under the command of Chief of Division Rodrigo de Lamare, in support of the contingents that would promote Independence in Bahia.

To combat the concentrations of Portuguese troops, which were stronger in the captaincies of Bahia, Maranhão, Grão-Pará and Cisplatina, and to reject any attempt at recolonization by the former metropolis, it was necessary to prepare a squadron capable of obtaining control of the sea, intercept incoming Portuguese reinforcements, blockade enemy positions and maintain the new Empire's maritime lines of communication, guaranteeing national unity. The agile action of the ships of the Brazilian Navy, at a great distance

of its supply bases and the center of political power, collaborated so that the Independence project reached all regions of the then Colony, preventing the political breakdown verified in the Spanish possessions

in the Americas.

Brazil's maritime interests are historical and wide. The sea was the route of discovery, colonization, trade, foreign invasions and consolidation of Independence, as well as an arena

defense of sovereignty in several episodes, including two world wars.

In the 21st century, the country's geopolitical complexity and the importance of the sea for the development in Brazil lead to multiple scenarios for the performance of the Naval Force. Such scenarios, added to the immense maritime extensions, bring great challenges to the fulfillment of the mission of the Brazilian Navy.



MISSION OF NAVY OF BRAZIL

Prepare and use Naval Power in order to contribute to the defense of the Homeland; for the guarantee of constitutional powers and, on the initiative of any of them, of law and order; for the fulfillment of subsidiary attributions provided for by law; and for support to Foreign Policy.

To carry out its tasks, the Navy prepares its operating and support bodies, in accordance with the policies established by the Ministry of Defense.

The Navy has as particular subsidiary attributions:

- guide and control the Merchant Marine and its related activities, with regard to National Defense;

- provide for the safety of waterway navigation;

- contribute to the formulation and conduct of

national policies concerning the sea;

- implement and supervise compliance with laws and regulations, at sea and in inland waters, in coordination with other bodies of the Executive Branch, federal or state, when necessary, in

ratio of specific skills; It is

- cooperate with federal agencies in the repression of crimes of national or international repercussion, regarding the use of the sea, inland waters and port areas, in the form of logistical support, intelligence, communications and instruction.

- Special Attorney for the Navy (PEM);

- Secretariat of the Interministerial Commission for the Resources of the Sea (SECIRM); It is

- Navy Social Communication Center (CCSM).

d) Seven Sector Management Bodies:

- Naval Operations Command (ComOpNav);

- Directorate-General for Navigation (DGN);

- General Secretariat of the Navy (SGM);

- General Directorate of Navy Material (DGMM);

- General Directorate of Navy Personnel (DGPM);

- General Command of the Marine Corps Naval (CGCFN); It is

- Directorate-General for Development Nuclear and Marine Technology (DGDNTM).

AUTHORITY MARITIME

The commander of the Navy is invested, by law, as a "Maritime Authority". assignments of the Maritime Authority are related to the matters related to Maritime Power.

ORGANIZATION AND OPERATIVE MEANS

The Navy Command has the following organizational structure:

a) A governing body, the General Staff of the Navy (EMA).

b) A Higher Advisory Body, the Admiralty.

c) Six Direct Assistance Bodies and

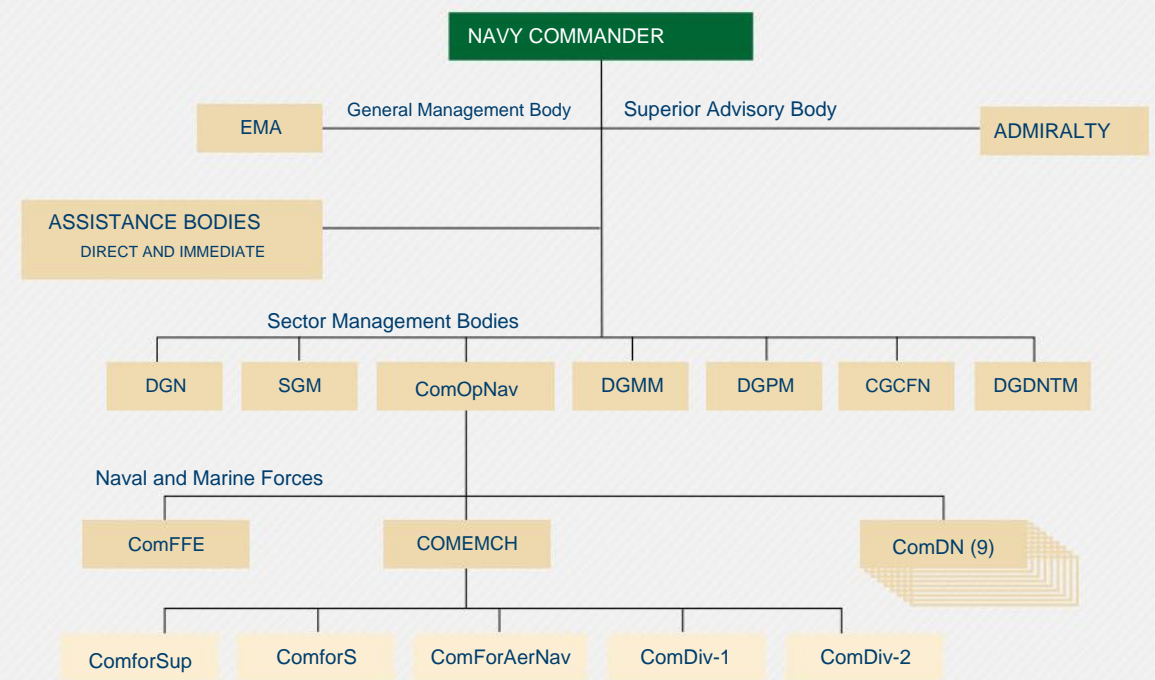
Immediate to the Commander of the Navy:

- Office of the Commander of the Navy (GCM);

- Navy Intelligence Center (CIM);

- Navy Internal Control Center (CCIMAR);

ORGANIZATION CHART OF NAVY



THE NAVAL OPERATIONS COMMAND (COMOPNAV)

ComOpNav is responsible for preparing and employing Naval, Air, and Marine Forces in Naval Warfare operations and actions for the Defense of the Homeland, in Limited Force Employment activities, as well as Humanitarian Operations, Civic-Social Actions, and Support to Foreign Policy, to the degree appropriate to the needs presented.

It comprises the Fleet Command-in-Chief (ComemCh), the Naval District Commands (ComDN), the Fleet Marine Force Command, the Integrated Maritime Security Center and the Warfare Center.

Navy Electronics.

ComemCh is the core of Naval Power Brazilian, with the purpose of maintaining of subordinate commands in the highest degree of readiness for naval operations and naval warfare actions. It is up to the Command in Chief of the Squadron:

n plan naval and naval air operations;

n supervise, at the Squadron level, the employment of subordinate commands;

n supervise administrative activities related to military organizations (OM);

n submit to higher levels rules relating to employment, organization

and maintenance of commands and subordinate establishments; It is

n supervise, within the scope of the Squadron, the use of resources necessary for the readiness of the commands and bodies subordinates.

Administratively, the Squadron is subdivided into forces, which are organized according to the operational environment in which their units work. Are they:

n Surface Force Command (ComForSup);

n Submarine Force Command (ComForS);

n Naval Air Force Command (ComForAerNav).

To support ComemCh in the organization, execution and evaluation of naval operations delegated to the Squadron, there are also two OM subordinate: the Command of the First Division of the Squadron (ComDiv-1) and the Squadron's Second Division Command (ComDiv-2).

The Squadron, headquartered on the island of Mocanguê, Niterói (RJ), is supported by the following bases and centers:

n Rio de Janeiro Naval Base (BNRJ), to support ships;

n Almirante Castro e Silva Base (BACS), to support submarines;

n Almirante Marques de Leão Training Center (CAAML), responsible for training and professional improvement of the military that man the operational means, with emphasis on the performance of naval operations and damage control;

n Operating Systems Support Center

(CASOP), intended to ensure the readiness of combat systems of naval assets;

n Almirante Átila Monteiro Aché Training Instruction Center, responsible for training and professional improvement related to Submarine, Diving, Combat Diving and Hyperbaric Medicine activities;

n Vessel Maintenance Center Offals (CMEM); It is

n Police Station Medical Unit (UMEsq).

AERONAVAL MEANS OF THE SQUAD

The Naval Air Force Command, headquartered in São Pedro da Aldeia (RJ), has subordinates, among other military organizations, an air base

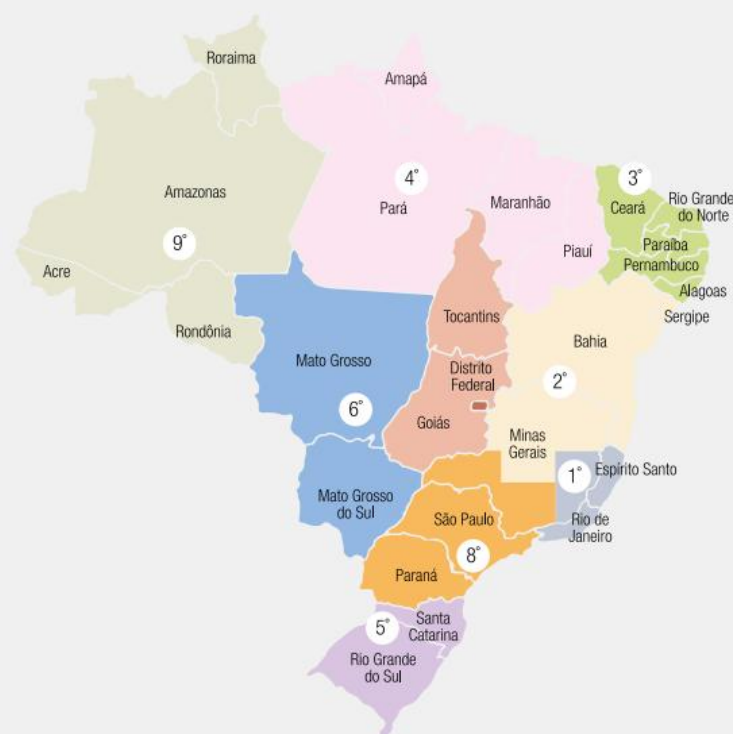
naval fleet, five squadrons of helicopters and a squadron of interceptor and attack aircraft.

THE NAVAL DISTRICTS

The purpose of the Naval District Commands (ComDN) is to contribute to the fulfillment of the Navy's tasks, in their respective areas of jurisdiction. are, to

nine ComDN, headquartered in the cities of Rio de Janeiro (RJ), Salvador (BA), Natal (RN), Belém (PA), Rio Grande (RS), Ladário (MS), Brasília (DF), São Paulo (SP) and Manaus (AM).

GEOGRAPHICAL DISTRIBUTION OF THE LARGE COMMANDS AND MAIN ORGANIZATIONS



THE MARINE CORPS (CFN)

The Royal Navy Brigade was the origin of the Brazilian Marine Corps. Created in Portugal, on August 28, 1797, by order of Queen D. Maria I, she arrived in Rio de Janeiro in 1808, accompanying the royal family

Portuguese who emigrated to Brazil.

The marines' baptism of fire occurred in the expedition to French Guiana (1808/1809), with the capture of Cayenne. In 1809, D. João Rodrigues Sá e Menezes, Count of Anadia, then Minister of the Navy, determined that the Royal Brigade of the Navy occupy the Fortress of São José, on the island of Cobras, where until today the General Command of the Marine Corps naval

has its headquarters.

After the return of King D. João VI to Portugal, a Battalion of the Royal Navy Brigade remained in Rio de Janeiro. Since then, the sailor-soldiers have been present in all the important episodes of the History of Brazil, be it in the struggles for the consolidation of Independence, be it in the Plata campaigns or in other conflicts, in which the Country was engaged.

Over the years, the CFN has received various denominations: Rio de Janeiro Navy Artillery Battalion, Navy Artillery Corps, Naval Battalion, Marine Infantry Corps, Naval Regiment and, finally, since 1932, the Marine Corps. In the 1950s, the CFN was structured for operational use as a Landing Force, becoming part of the Navy destined for the actions and land operations necessary for a naval campaign.

The CFN is a professional and voluntary troop, which gives Naval Power the ability to project power over land and expands its ability to control maritime areas and deny the use of the sea. This strategic Naval Force, of an amphibious and expeditionary character, expands its possibilities to act in any region that configures a strategic scenario of interest. The CFN is essential for the defense of naval and port facilities, as well as archipelagos and oceanic islands in Brazilian jurisdictional waters, and to ensure control of the margins of waterways during riverine operations.

DISTRICT NAVAL FACILITIES

The Commands of Naval Districts have operational naval resources, which are distributed in their jurisdictions.



District Patrol Vessels | Brazilian Navy/Disclosure



Operation Feline | Brazilian Navy/Disclosure

Organization

The CFN is inserted in the organization of the Navy, through the General Command of the CFN (CGCFN) and its operational component, the Fuzileiros Force Command of the Squadron (ComFFE), the latter subordinate to the Naval Operations Command.

The Fleet Fusiliers Force (FFE) is an organized, trained and equipped Force to execute Amphibious Operations, Riverside Operations, Peace, Humanitarian and Support to Government Agencies. It is structured as follows:

The Amphibious Division – three Battalions of Infantry, one Artillery, one Armored, one of Tactical Air Control and Anti-Aircraft Defense and one for Command and Control, in addition to a Marine Corps base for support;

B. Reinforcement Troop – a Logistics Battalion, an Engineering Battalion and an Amphibious Vehicle Battalion, a Police Company and a Disembarkation Support Company, in addition to a Marine Marine Base for support;

w. Landing Troop - operational command, permanently activated, which

gives agility to the ComFFE in the use of its Fuzileiros Operative Groups Naval (GptOpFuzNav).

d. Marine Corps Special Operations Battalion – special operations unit, preferably used in maritime or river environments; It is

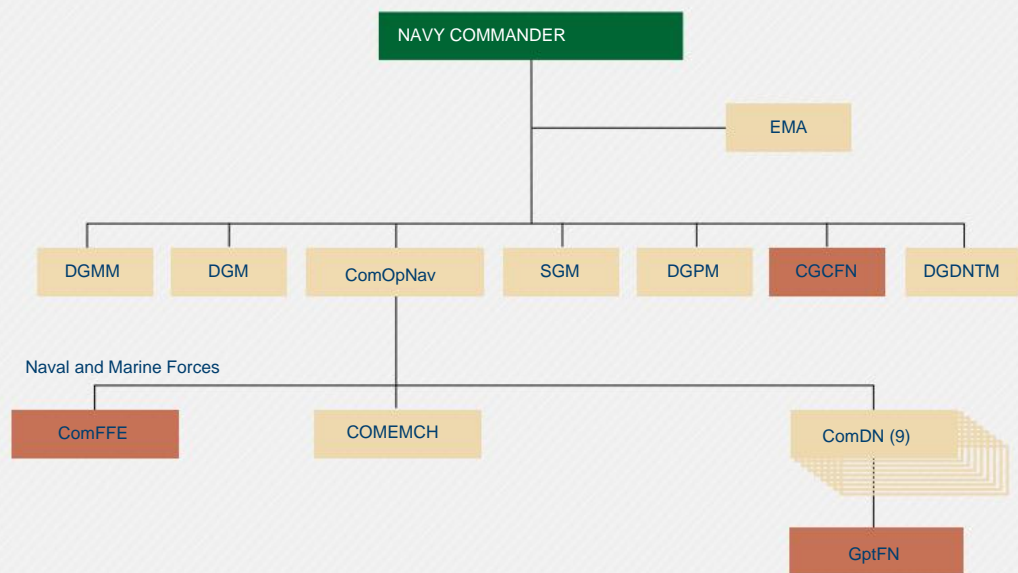
It is. Rio Meriti Marine Corps Base

– support unit that provides the personnel and material to carry out the necessary command, control and administration.



Brazilian Navy/1 SG - OR - Laurentino

REPRESENTATION OF MARINES ON THE NAVY ORGANIZATION CHART



THE GENERAL DIRECTORATE OF NAVIGATION (DGN)

The General Directorate of Navigation has the purpose of contributing to the preparation and application of Naval Power and Maritime Power, with regard to activities related to maritime affairs, navigation safety, safeguarding human life, hydrography, oceanography and meteorology. The following specialized directorates are subordinated to the DGN: Directorate of Ports and Coasts (DPC) and Directorate of Hydrography and Navigation (DHN).

The Directorate of Ports and Coasts has the purpose of contributing to the guidance and control of the Navy Mercante, and related activities, with regard to the National Defense, contributing to the safety of waterway traffic; the prevention of pollution

by vessels, platforms and their support stations; the formulation and execution of national policies concerning the sea; the implementation and enforcement of laws and regulations at sea and inland waters.

The Board of Hydrography and Navigation has the purpose of supporting the application of the Power Naval, through activities related to hydrography, oceanography, cartography, meteorology, navigation and nautical signaling; ensure the quality of navigation safety activities in the maritime area of interest to the Brazil and on inland waterways; and contribute to national research projects in Brazilian jurisdictional waters and to those resulting from

international commitments.

The Ports and Coasts Board and the Board of Hydrography and Navigation the preparation and approval of the Maritime Authority Rules

related to their competences, thus contributing to the fulfillment of the tasks assigned to the Maritime Authority.



Hydroceanographic Research Vessel Vital de Oliveira | Brazilian Navy/Disclosure

CAPABILITIES

The Navy currently has around 80,000 troops. It plans to reduce it to 69 thousand, gradually, until 2030, in order to adapt to a prospective national scenario closer to reality. However, in view of the Strategic Actions of the National Defense Strategy, with priority given to compliance with the

Articulation and Defense Equipment (PAED), in particular, the Navy's Nuclear (PNM), Submarine Development (PROSUB) and Construction of Tamandaré Class Corvettes programs. In any situation, the Navy must be capable of fulfilling the four basic tasks of Naval Power: denying the use of the sea to the

enemy, control sea areas, project power over land, and contribute to deterrence.

The Naval Force, with different types of ships, having its air wing embarked and captained by an aircraft carrier, has the characteristics of mobility, permanence, flexibility and versatility that enable it to fulfill a wide spectrum of missions, from humanitarian and peace, even those typical of

crisis maneuver or conflict.

For the fulfillment of its mission of To cooperate with the defense of sovereignty, territorial integrity and the country's maritime interests, the Force needs to have submarines, whose exceptional mobility guarantees the advanced defense of the most distant maritime border.

The surface Naval Force will have both medium and large ships, capable of

to operate and remain for a long time on the high seas, as with smaller ships, dedicated to patrolling the coast and the main rivers

Brazilian navigable.

To ensure readiness and safeguard Brazilian sovereignty and interests, both in the country and abroad, the Navy will maintain forces in conditions of immediate employment (Fast Employment Force) in naval warfare operations and actions, in peacetime, or in situation of crisis and conflict.

The Navy, employing its naval, naval air and marine resources, is able to carry out non-combatant evacuation operations, peace operations, humanitarian actions and projecting an amphibious troop, regardless of the degree of hostility and the

type of mission to accomplish.

EDUCATION - MAIN SCHOOLS

Naval School (EN)

The Naval Academy was created in 1782, in Lisbon, Portugal, by Royal Charter of Queen D. Maria I, under the name Academia Real de Guardas Marinha. In Brazil, it was first installed in the Monastery of São Bento, and remained there until 1832.

Since then, it has undergone numerous changes of facilities, having even operated on board ships. Finally, in 1938, he settled on the island of Villegagnon, in the city of Rio de Janeiro.

Its higher education course lasts five years and prepares Navy officers for the initial posts in the careers of the Corps of the Navy (CA), Marine Corps (CFN) and Navy Quartermasters (CIM). At the end of fourth year, the Candidate is declared Guard Navy (GM) and, at the end of the fifth year, concludes Bachelor's Degree in Naval Science.



Naval School | Brazilian Navy/Disclosure

Naval College

In February 1949, the current Colégio Naval was created, an educational institution whose purpose is to prepare young people to form the Corps of Aspirants of the Naval Academy. O

Admission is carried out through a public tender and, during the period spent at the College, he receives high school teaching, plus specialized military-naval instruction.

Naval War College (EGN)

Created in 1914, located in the city of Rio de Janeiro, the EGN is an institution of higher military studies whose purpose is to contribute to the training of officers to perform operational and administrative commissions; prepare them for

staff functions; and improve them for the exercise of command, leadership and direction positions in the highest levels of the Navy. To this end, it has the task of teaching, updating, standardizing and expanding the knowledge of officers and carrying out scientific research of interest

of the Navy in the areas of National Defense, Maritime Power, Naval Warfare and Administration.

At EGN, the General Staff courses for Intermediate Officers and those for higher military studies (General Staff Course for Senior Officers – CEMOS, Higher Course – CSUP and Maritime Policy and Strategy Course – CPEM) are taught, all with an approximate duration of one year.



Naval War College (EGN)/Disclosure

Admiral Wandenkolk Training Center (CIAW)

Created in 1945, the CIAW is located on Ilha das Enxadas, Rio de Janeiro. It is a training center for officers from the Navy Corps of Engineers (CEM), the Navy Health Corps (CSM), the Navy Auxiliary Corps (CAM) and the Complementary Staff (QC) of the Marine Corps.

There are also courses in Improvement (in armaments, communications, electronics and machines, as post-graduation), Advanced Improvement and Training of Officers of the Mandatory and Voluntary Military Service, in addition to expedited and special courses.

Navy, Marines and Quartermasters.

Almirante Newton Braga Instruction and Training Center (CIANB)

Created in 2013, CIANB is located in the Naval Supply Complex, in Olaria, Rio de Janeiro. At the Center, courses are given

Improvement of Intendance for Officers (CAIO) and Advanced Improvement (C-ApA) in areas of knowledge of Administration.

Navy Health School (ESM)

The Navy's Health School aims to contribute to the effectiveness of the Navy's Health System (SSM), with regard to the completion of health training activities and is intended to

the training of middle and higher level personnel, as well as the execution of extension courses, expedited and special in the area of health.

Center for Political-Strategic Studies (CEPE-MB)

The Center for Political-Strategic Studies (CEPE-MB), installed at the War College Naval (EGN), aims to promote scientific research, strategic studies of MB's interest and the exchange with the environment academic. In this sense, its activities are usually carried out in conjunction with the EGN Research and Graduate Superintendence (EGN-SPP), which allows the

with the participation of students from the Postgraduate Studies in Maritime Studies (PPGEM), the first Stricto Sensu program at MB, in addition to of students and academics from civil universities. EGN-SPP also has the Laboratory Simulations and Scenarios (LSC), the Maritime Policy Studies Nucleus (NEPOLM) and the Conjuncture Assessment Nucleus (NAC), as well as Ad Hoc Research Groups.

academic event audiences contain

Center for the Coordination of Studies in São Paulo (CEMSP)

The Navy, for several years, has been training its military engineers through a partnership with the University of São Paulo (USP) and, to this end,

maintains a Study Coordination Center (CEMSP) on the USP campus.

Almirante Alexandrino Instruction Center (CIAA)

The CIAA has its origins in the Sailors' Barracks (QM), created in 1836, in the city of Rio de Janeiro. It is responsible for training and improving the enlisted personnel, providing training courses, specialization, improvement, advanced improvement, special technical qualification, expedited, special and training of

ranks of the Mandatory and Voluntary Military Service.

In this Center, cables are formed specialists and sergeants in the following areas: craftsmen (metallurgy and mechanics), weapons, administration, carpentry, communications, electricity and electronics, machinery, mechatronics, telematics, among others.

Almirante Sylvio de Camargo Instruction Center (CIASC)

The CIASC has its origins in the Center for Instruction of the Marine Corps (CICFN), created in 1955. Located in Rio de Janeiro,

It is in charge of training and improving officers and soldiers of the Marine Corps. This Center offers specialization courses

for corporals, training and improvement of sergeants, and improvement in war

amphibious, expeditionary and advanced training for officers.

SCIENTIFIC AND TECHNOLOGICAL INSTITUTIONS

The Navy's Science, Technology and Innovation System (SCTM) has as its central body executive to the Directorate-General for Development Nuclear and Technological Navy (DGDNTM), which exercises planning, guidance, coordination and control of activities

nuclear, scientific, technological and innovation activities of the Navy. SCTM has twelve Scientific, Technological and Innovation Institutions - ICT, directly subordinated or technically linked to the DGDNTM, in addition to itself, namely:

Navy Technological Center in São Paulo (CTMSP)

The CTMSP, with headquarters in São Paulo and Iperó (SP), was created in 1986 with the purpose of contributing to obtaining systems, equipment, components, materials and techniques in the areas of

propulsion and power generation, of interest to the Brazilian Navy (MB), especially those related to the nuclear sector.

Directorate of Nuclear Development of the Navy (DDNM)

DDNM, headquartered in the city of São Paulo, had its origin in the Technological Center of the Navy in São Paulo (CTMSP), in 2017, installed in the premises of the University of São Paulo, in the city of São Paulo. It was created with the purpose of

develop and improve installations, systems, equipment, components, instruments, materials, manufacturing processes, assembly and maintenance in the areas of power generation nuclear power and associated technologies.

Navy Technological Center in Rio de Janeiro (CTMRJ)

The Navy Technological Center in Rio de Janeiro (CTMRJ), activated in 2017, has the purpose of unifying the Administrative Management and Science, Technology and Innovation (CT&I) of its subordinate OM CASNAV, IEAPM and IPqM;

meet the technological demands arising from the SDGs, ensure the MB's non-nuclear projects, advise the various levels of the Force's leadership and provide technical guidance in the areas of knowledge that are incumbent upon it.

Almirante Paulo Moreira Institute of Sea Studies (IEAPM)

Created in 1985, located in the city of Arraial do Cabo (RJ), the mission of the IEAPM is to plan and carry out scientific, technological and innovation activities in the areas of oceanography, meteorology, biotechnology, marine geology and geophysics, underwater acoustics, remote sensing,

oceanographic instrumentation and coastal and oceanic engineering, in order to contribute to obtaining models, methods, systems, equipment, materials and techniques that allow better knowledge and effective use of the marine environment, in the interest of the Navy.

Marine Research Institute (IPqM)

Founded in 1959, in Rio de Janeiro, the Institute's mission is to develop of technologies necessary for the Navy, concentrating its research activities

and development in weapons systems, sensors, electronic warfare, acoustic warfare, digital systems, and materials technology.

Naval Systems Analysis Center (CASNAV)

Created in 1975, CASNAV's mission is to provide integrated solutions, of a technical and multidisciplinary nature, to meet the high-level demands of the Naval Administration, within the

areas of its competence, namely: Operations Research, Engineering of Strategic, Operational and Administrative Systems, Modeling, Simulation, Systems Security and Cryptography.

Directorate-General for Nuclear and Technological Development of the Navy (DGDNTM)

The DGDNTM, headquartered in the city of Rio de Janeiro, in addition to exercising the role of central executive body of the SCTM, is also recognized as ICT, contributing directly to: the preparation of Navies of Tomorrow and the Future; the application of Naval Power, in activities related to science, technology and innovation; the program Submarine Development (PROSUB);

and the Navy Nuclear Program (PNM). It should also be noted that the DGDNTM has the Technological Innovation Center - NIT, the sector responsible for managing the Navy's innovation guidelines, intellectual property and technological intelligence, and is even shared by the other Navy ICT.

EXCHANGE AND COOPERATION WITH OTHER COUNTRIES

The Navy maintains a series of activities and improve training. The most relevant are presented below. exchange and cooperation with other nations, in order to strengthen friendly relations

MILITARY EXERCISES WITH OTHER COUNTRIES (2016/2019)		
Operation/Exercise	Host country	participating countries
ASPIRANTEX	Argentina and Uruguay	Brazil, Uruguay and Argentina
	Multinational exercise, aims to improve the training of means and strengthen the bonds of friendship	
BRACOLPER	Colombia and Peru	Brazil, Colombia and Peru
	Multinational exercise that aims to strengthen ties of friendship with the countries visited.	
CARIBBEAN	Central American countries	Brazil, Guyana, Puerto Rico, Antigua and Barbuda, Martinique and Suriname
	Multinational exercise aimed at training and representation visits to foreign ports	
PLATINUM	Paraguay	Brazil and Paraguay
	Binational exercise aimed at training and strengthening friendship ties	
ACRUX	Argentina and Paraguay	Brazil, Argentina and Paraguay.
	Multinational exercise that aims to carry out a combined operation and strengthen ties of friendship	
DIPLOMEX	Argentina	Brazil, Uruguay and Argentina
	Multinational exercise that aims to strengthen ties of friendship and exchange of nautical signaling activities	
LIX UNITS PHASE I and II	Argentina	Brazil, USA, Argentina and Uruguay
	Multinational exercise aimed at training and strengthening friendship ties	

LIX UNITS PHASE I and II	Argentina	Brazil, USA, Argentina and Uruguay
	Multinational exercise aimed at training and strengthening friendship ties	
FRATERNAL	Argentina	Brazil and Argentina
	Multinational exercise aimed at presence action, in addition to strengthening friendship ties	
ATLANTIS	Uruguay	Brazil and Uruguay
	Binational exercise that aims to improve the training of means and strengthen the bonds of friendship	
ATLASUR / IBSAMAR/MAPUTO	South Africa	Brazil, India, South Africa and Mozambique
	Multinational exercise aimed at presence action, in addition to strengthening friendship ties	
NATIONAL PARTY FRENCH	French Guiana	Brazil and France
	Binational exercise aimed at presence action, in addition to strengthening bonds of friendship	
UNITS LAN	Brazil	Brazil, USA, Argentina, Chile and Uruguay
	Multinational exercise aimed at training and strengthening friendship ties	
PANAMAX	USA	Brazil, USA and Latin American countries
	Exercise conducted by the United States of America Southern Command (USSOUTHCOM), whose main objective is to carry out combined and joint planning, aiming at the constitution of a Multinational Force to act under the authorization of the United Nations Security Council	
FELINE	Brazil, Cape Verde and Sao Tome and Principe	Brazil, Angola, Cape Verde, Guinea Bissau, Mozambique, Sao Tome and Principe, Portugal and East Timor
	Multinational exercise aimed at organizing and exercising a combined joint task force (FTCC) of the CPLP and testing C2 procedures in peacetime in a crisis situation	
EXERCISE OF COOPERATION IN CASES OF DISASTERS	Argentina	Brazil and Argentina
	It is a multinational single-action exercise whose main focus is the integration of the Air Forces in the processes of planning, coordination, command and control of air operations in situations of natural disasters, humanitarian aid and Search and Rescue.	

WOMEN IN THE NAVY

Women began to occupy positions in the Navy in 1980, when entry into the Force was regulated by law. As officers and privates, they work in several areas, such as medicine, dentistry, health support (nursing, psychology, nutrition, physiotherapy and pharmacy), engineering, architecture, civil construction, pedagogy, accounting, administration, law, history, social communication, music, museology, library science, information technology, economics, social work, waterway traffic safety, physical education, oceanography and meteorology, among others

need of the Navy.

On November 25, 2012, Captain of Sea and War Dalva Maria Carvalho Mendes,

of the medical staff of the Health Corps of Navy, was the first Brazilian to be promoted to the generalship (Rear Admiral).

As part of the continuous process of updating and improving the management of its personnel, the Naval Force admitted, in 2014, the first group of female Aspirants from the Naval Academy (EN).

In April 2018, Lieutenant Captain Rosângela dos Santos Farias, belonging to the Technical Staff of the Brazilian Navy, trained in Pedagogy, was the first woman to assume leadership of the post detachment Trindade Island Ocean Park (POIT).



Women in the Navy | Brazilian Navy/Disclosure

BRAZILIAN ARMY

The origin of the Brazilian Army (EB) dates back to the colonial period, in the early days of the formation of nationality, during the fight against Dutch invaders. The first Battle of Guararapes, which took place on April 19, 1648, was the historical event considered to be the genesis of the Army.

On that occasion, the forces that fought against the invaders were genuinely formed by Brazilians (whites, blacks and Amerindians).

As early as 1822, the Army cooperated in the conquest of independence, supporting Emperor D. Pedro I in the fight that consolidated the political emancipation of the country.

Even during the imperial period, the Army fought in the Platine conflicts and contributed to the guarantee of the integrity of the Brazilian territory. Led by Marshal Deodoro da Fonseca, the EB was a key player in the establishment of the republican regime in 1889.

Thus, the Army played and continues to play a relevant role in maintaining national unity and integrity. Its historical evolution is intertwined with that of the country itself. It is present throughout the national territory.

The country's geopolitical complexity entails multiple scenarios for the Force's performance Terrestrial, whose mission is conditioned by the

continental dimensions of a territory characterized by the variety of geographical environments and extensive border strip with ten countries.



MISSION OF ARMY BRAZILIAN

Prepare the Land Force, its operational arm, to fulfill its constitutional purpose of defending the Homeland and guaranteeing constitutional powers, law and order. In addition, as a general subsidiary assignment, it must cooperate with national development and Defense sa Civil. It should also support the foreign policy of the country and participate in international operations.

It is also up to the Army, as attributions private subsidiaries:

- contribute to the formulation and conduct of national policies concerning the Land Military Power;

- cooperate with federal, state, and municipal public bodies and, exceptionally, with private companies, in the execution of engineering works and services, with funds coming from the requesting body; It is

- cooperate with federal agencies, when necessary, in the repression of crimes with national and international repercussions, in the national territory, in the form of logistical support, intelligence, communications and instruction.

It is also up to the Army to preserve the exclusive competences of the judicial police, to act, through preventive and repressive actions, in the land border strip, against cross-border and environmental crimes, alone or in coordination with other Armed Forces or bodies of the Executive Power, executing, among others, the actions of :

- patrolling;

- search of people, land vehicles, vessels and aircraft; It is

- arrests in flagrante delicto.

ORGANIZATION AND OPERATIVE MEANS

The Army Command has the following organizational structure:

a) A General Management Body, the General Staff of the Army (EME).

b) Four Advisory Bodies Higher:

- Army High Command (ACE);

- Superior Council of Economy and Finance (CONSEF);

- Superior Council of Technology of the Information (CONTIEx); It is

- Superior Council for Rationalization and Transformation (CONSURT).

c) Six Direct Assistance Bodies and Immediate to the Commander of the Army:

- Office of the Army Commander (Gab Cmt Ex);

- General Secretariat of the Army (SGEx);

- Army Intelligence Center (CIE);

- Army Social Communication Center (CComSEx);

- Army Internal Control Center (CCIEEx); It is

- Deputy Legal Consultancy of the Command of the Army (CJACEx).

d) An Operational Management Body:

- Ground Operations Command (COTER)

e) Six Sector Management Bodies:

- Logistic Command (COLOG);

- Department of Engineering and Construction (DEC);

- General Department of Personnel (DGP);

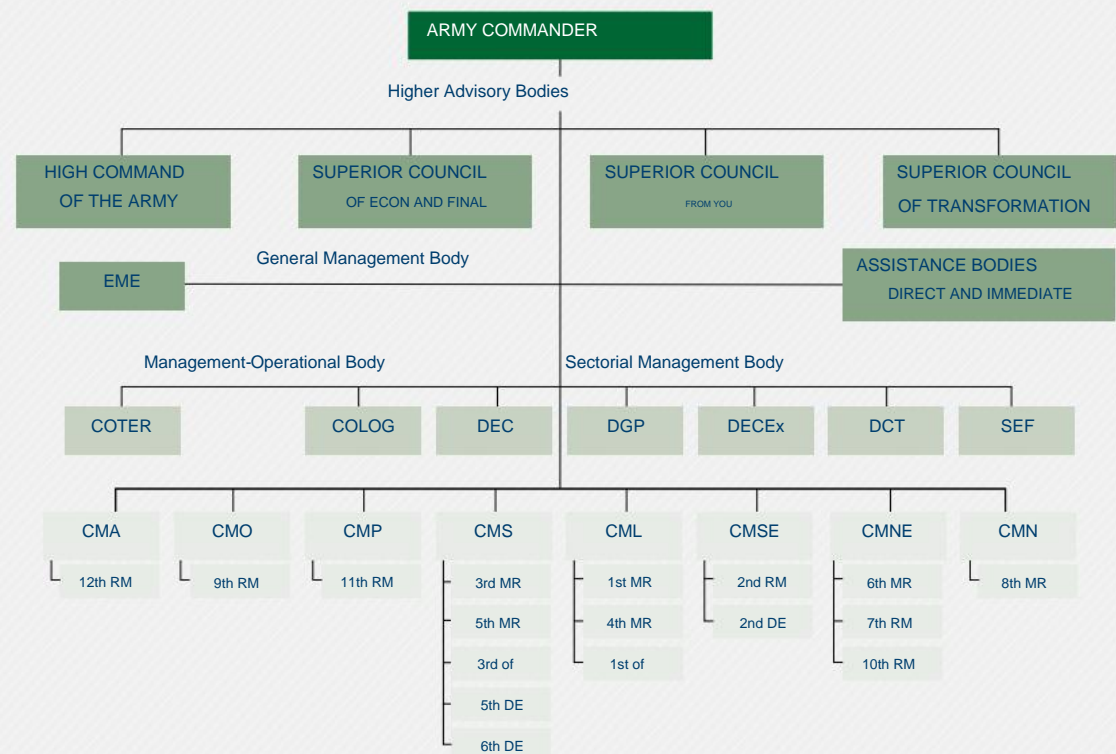
- Department of Education and Culture of the Army (DECEx);

- Department of Science and Technology (DCT); It is

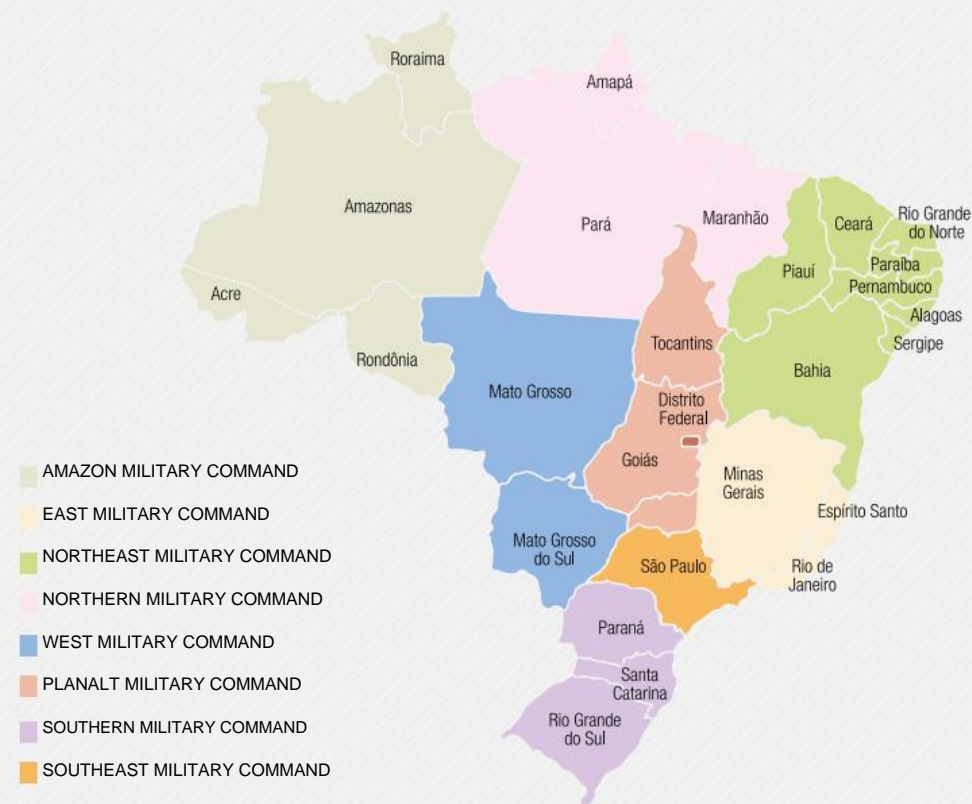
- Secretariat of Economy and Finance (SEF).

The Army has 670 military organizations distributed throughout the national territory. It also has 219 Tiros de Guerra in all regions of the country. The approximate headcount is 220 thousand soldiers.

ARMY ORGANIZATION CHART



GEOGRAPHICAL DISTRIBUTION OF AREA MILITARY COMMANDS



LAND FORCE

The Land Force itself is composed of eight Military Area Commands:

- n Military Command of the Amazon (CMA);
- n Western Military Command (CMO);
- n Planalto Military Command (CMP);
- n Southern Military Command (CMS);

- n Eastern Military Command (CML);
- n Southeast Military Command (CMSE);
- n Northeast Military Command (CMNE); It is
- n Northern Military Command (CMN).

LAND FORCE STRUCTURE

The Military Area Commands (C Mil A) comprise large operational commands – the Army Divisions (DE) – and large logistical, administrative and territorial commands – the Military Regions (RM). The Earth Force has five Army Divisions and twelve Military Regions. The Southern and Eastern Military Commands have divisional artillery (two in the CMS and one in the CML) and those in the Amazon, in the

Northeast, West and South each have an engineering group. Brigades are combined arms commands that can be framed by Army divisions or be directly subordinated to the Military Area Commands. The Army has 26 brigades, one of which is Anti-Aircraft Artillery. The main types of brigade are:

n light brigades: Jungle Infantry Brigade, Border Infantry Brigade, Motorized Infantry Brigade, Light Infantry Brigade and Parachute Infantry Brigade.

n medium brigades: Infantry Brigades Mechanized and Mechanized Cavalry.

n heavy brigades: Armored Cavalry Brigade and Armored Infantry Brigade.

There are also five commands for specific use:

n Army Aviation Command (CAvEx);

n Special Operations Command (COpEsp);

n Communications and Warfare Command Army Electronics (CComGEx);

n Army Artillery Command (CmndoArtEx); It is

n Cyber Defense Command (ComDCiber).

EDUCATION - MAIN SCHOOLS

Agulhas Negras Military Academy (AMAN)

AMAN has its origins in 1792, with the creation, in Rio de Janeiro, of the Royal Academy of Artillery, Fortification and Design – the first military school of the Americas. during the century XIX, had the names of Royal Military Academy, Imperial Military Academy and Military Academy of the Court. From 1906 to 1910, it operated in Porto Alegre, at the Escola de Guerra, and, in 1913, at the Escola Militar do Realengo (RJ). Only on January 1, 1944, it was installed in its permanent headquarters, in Resende (RJ), calling itself

Military School of Resende. In 1951, it was renamed Academia Militar das Agulhas Negras.

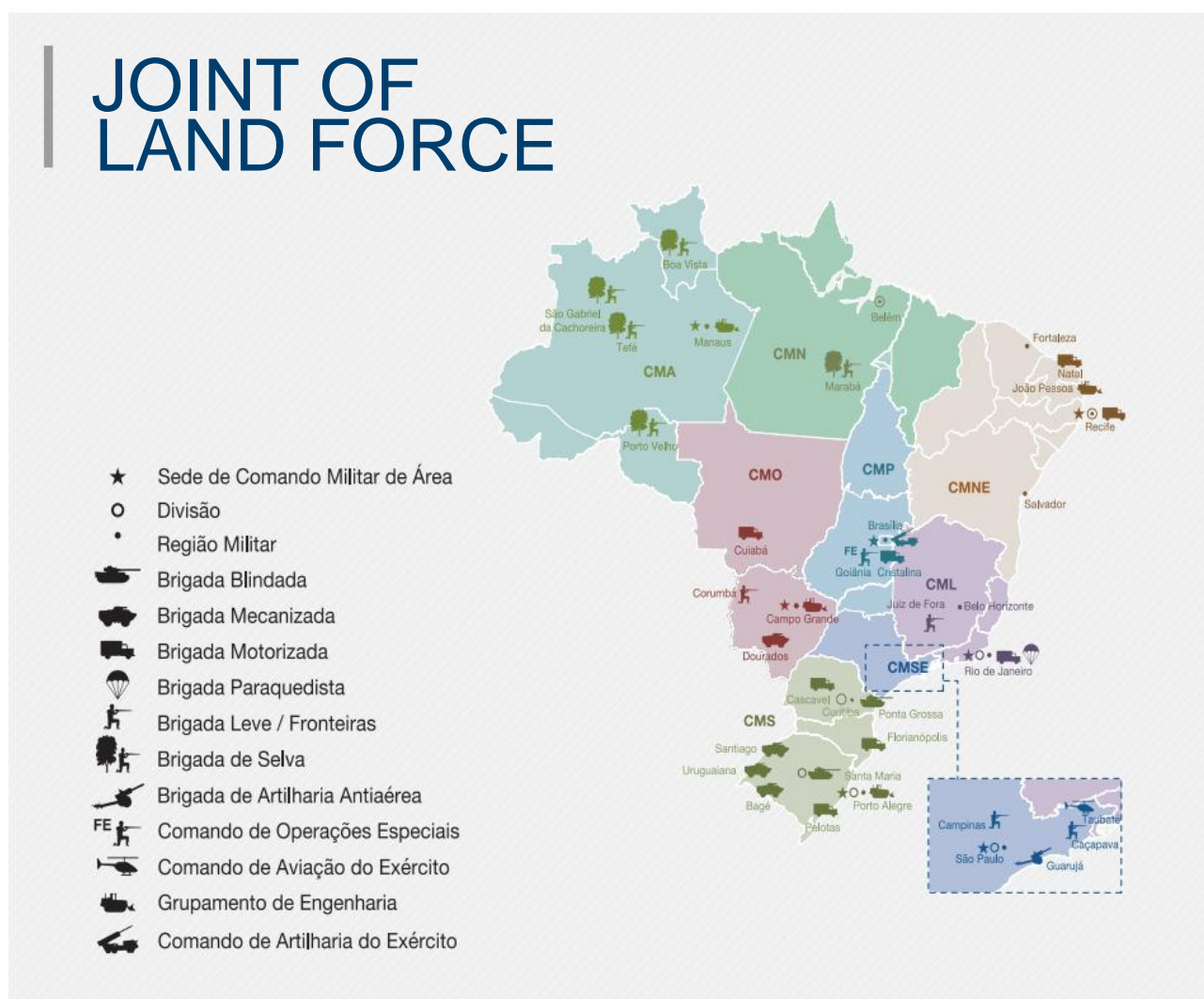
AMAN is the educational establishment higher education that trains career combat officers in the Army. In the training course, activities are carried out that are based on the development of attributes necessary for military profession. Being a five-year course, the first is held at the Preparatory School for Army Cadets (EsPCEEx) and the remaining four at AMAN.

The great creator of AMAN was Marshal José Pessôa Cavalcanti de Albuquerque, who chose the site for the new headquarters, prepared the project

that would make it a reality and rescued the title of "cadet", having also adopted the historic uniforms and created the Espadim de Caxias.



AMAN – Resende (RJ) | Brazilian Army/Disclosure



Preparatory School for Army Cadets (EsPCEEx)

Located in the city of Campinas, ESPCEEx is responsible for selecting and preparing young Brazilians to enter the Military Academy of the Black Needles. Upon completion of the course, which lasts one year, graduates are sent to AMAN as a cadet.

Officer Improvement School (EsAO)

Located in Rio de Janeiro and founded in April 8, 1920, the School's mission is to perfect captains, qualifying them for the command and leadership of units and enabling them for the exercise of staff functions not exclusive to the Army's Active Staff Group (QEMA).

Army Command and General Staff School (ECEME)

Founded in 1905, located in Rio de Janeiro, ECEME is an educational establishment whose mission is to prepare senior officers for the exercise of general staff, command, leadership, direction and advisory functions at the highest decision-making levels. It cooperates with the general and sectoral directorate bodies in the development of doctrine for the preparation and use of the Force. War Superior (ESG) and civil universities. Annually, it receives officials from friendly nations for its courses, mainly from South America.

ECEME contributes to the construction of a defense and doctrine mentality, together with the sister schools of the Navy (EGN), the Brazilian Air Force (ECEMAR), Escola ECEME has the Meira Mattos Institute (IMM) that develops and disseminates scientific research, postgraduate studies and Defense Studies, creating stricto sensu postgraduate opportunities for military and civilians. Currently, the IMM has a Master's, Doctorate and Post-Doctorate in Military Sciences, all approved by the Coordination of Personnel of Higher Level (CAPES).

Military Institute of Engineering (IME)

Located in the city of Rio de Janeiro, the IME it comes from the merger, in 1959, of the Technical School of the Army with the Military Institute of Technology. Army. It offers the following courses: Undergraduate Course, exclusively for officers coming from AMAN; Training and Graduation Course, aimed at young civilians who graduated from high school; and Training Course, aimed at

The IME's mission is to train officers to the Military Engineers Corps (QEM) of the

graduated engineers who wish to join the Force. He also teaches Master's Courses in the areas of Materials Science, Chemistry, Systems and Computing and Engineering

Cartographic, Defense, Electrical, Mechanical, Nuclear and Transport, and Doctorate in the areas of Materials Science, Defense Engineering and Chemistry, for civil and military.

Army Health School (EsSEEx)

The Army Health School was created in 1910, with the name of School of Application Military Medical. Located in the city of Rio de Janeiro (RJ), EsSEEx is a higher education training establishment, its competence, including in cooperation with similar institutions; of the line of provide internships on subjects peculiar to EsSEEx. military health education. Its mission is to form medical officials, dentists and pharmacists to active service in the Army; coordinate the postgraduate courses of these officers; contribute to the development of military doctrine in the area of health; carry out research in the area of

Army Complementary Training School (EsFCEx)

EsFCEx was created on April 5, 1988, under the name of Army Administration School (EsAEx). Headquartered in the city of Salvador (BA), EsAEx began its activities with courses given to Army officers and career graduates. Army, modifying its mission and organization. Since then, it has also trained officers of the Complementary Staff, related to the areas of: nursing, psychology, speech therapy, physiotherapy, social assistance, occupational therapy and nutrition, in addition to chaplains.

On October 2, 1989, Law No. 7,831 created the Complementary Staff of Officers, meeting the changes required by the Institution's modernization process. It was then up to EsAEx to train the officers of this new cadre.

On November 8, 2010, Ordinance No. 1080 transformed the Army Administration School into the Complementary Training School of the

In 2018, EsFCEx began to provide the State Management and Advisory Course Major (CGAEM), now held at ECEME. Its objective is to update and expand the professional qualification of senior officers of the Brazilian Army for the exercise of leadership and of General Staff advisory services.

School of Sergeants of Arms (ESA)

The School of Sergeants of Arms was created due to the need for greater

professionalization in troops. Its origin dates back to the School of Sergeants of 1894

when, at the time, it occupied the premises of the former Military School of Realengo, in Rio de Janeiro (RJ). In 1949, it was transferred to the city of Três Corações (MG), forming the first group of Sergeants in 1950.

ESA is the military education establishment responsible for training combat sergeants in Infantry, Cavalry, Artillery, Engineering and Communications. The course, which lasts two years, became a higher level

School of Logistics Sergeants (EsSLog)

Located in the city of Rio de Janeiro, it was created in 2010 by transforming the School of War Material. It is the educational establishment

officer responsible for training the Intendance sergeants, War Material Maintenance of Automobile Vehicle, War Material Maintenance of Armament, Ordnance Mechanic Operator, Maintenance of Communications, Health, Topography and Music; for the improvement of the Intendance sergeants, War Material Maintenance of

School for the Improvement of Sergeants of Arms (EASA)

The Escola de Aperfeiçoamento de Sargentos das Armas – EASA, Establishment of Military Education, headquartered in Cruz Alta (RS), being currently subordinated to the Directorate of Military Technical Education. It has the mission of Improving Sergeants of Arms and Qualifying Deputies of Command of the Brazilian Army, being recognized as a reference Teaching Institution, focused on the development of

technologist, starting in 2019. This curricular modification aims to develop skills (knowledge, skills and attitudes) in Army graduates that allow them to analyze the complex situations of the modern battlefield and the challenges imposed by combat. Thus, this new, higher-level professional profile enables the Sergeant of the 21st century to deal with the rapid advances in military doctrine and technologies added to defense products.

Car Vehicle, War Material Armament Maintenance, Mechanical War Material Operator, Communications Maintenance, Health, Topography and Aviation; for the specialization of sub-lieutenants and music sergeants; and for the specialization of Health officers and sergeants of the Brazilian Army. All activities curricula are developed with the purpose of to enable the student to exercise the functions to be performed in the troop corps.

human dimension and the continuing education of Brazilian Army graduates. EASA is an Educational Institution vector of innovations in the areas of Doctrinal, Administrative and Pedagogical, being a relevant educational pole for the Commanders of Small Fractions and for Deputies of Brazilian Army Command.

SCIENTIFIC AND TECHNOLOGICAL INSTITUTIONS

Army Technological Center (CTEx)

Created in 1979 and located in Rio de Janeiro (RJ), CTEx is a Military Organization subordinated to the Department of Science and Technology (DCT), whose main mission is the research and development of defense products of interest to the Land Force. The Center develops its activities in the following areas: Armament and Ammunition, Missiles and

Rockets, Military Vehicles (Armored and Non-Armored), Remotely Piloted Systems, Advanced Materials (Composites, Carbon and Energy), Information and Communications Technology (Radars, Military and Optronic Radios), Virtual Simulators and Chemical, Biological, Radiological and Nuclear.

Army Physical Training Center (CCFEx)

The Army Physical Training Center (CCFEx) is the technical-normative support body of the Department of Education and Culture of the Army, whose mission is to coordinate, control, supervise and promote teaching, research and sports activities in the areas of Physical Training and Riding,

in order to meet the needs of the Army

Brazilian, through its Organizations Military Directly Subordinates:

- n Army Sports Commission (CDE);

Army Assessment Center (CAEx)

The current CAEx comes from the merger, in 2005, of Campo de Provas da Marambaia

- n Army School of Physical Education (EsEFEx);

- n Army Riding School (EsEqEx);

- n Army Physical Training Research Institute (IPCEx); It is

- n Fortress Command and Service Battery of Saint John.

(CPM), with the former Army Assessment Center (CAEx). CAEx is an Organization

Military Subordinate to the Department of Science and Technology and its mission is to plan, coordinate, control and execute the Evaluation Technical and Operational Systems and Materials for Military Use (SMEM), Technical Evaluation of Army Controlled Product (PCE), Examination

of Ballistic Value of Ammunition and Technical Collaboration, which aims to support the Army's research and development OMs and the companies of the Defense Industrial Base in projects to develop new products.

Directorate of the Geographical Service (DSG)

DSG is responsible for producing more than 50% (fifty percent) of all existing topographic maps of the systematic terrestrial mapping of the national territory, having been responsible for the introduction in the country of various cartographic production techniques over the more than 100 years of its existence.

and Surveyors) in the production of Geoinformation necessary for defense and development Brazil's economic and social

DSG makes available on the Army Geoportal (<http://www.geoportal.eb.mil.br/portal/>) main your products for visualization and download, including topographic maps, technical specifications of national cartography, orbital images and elevation models.

Currently, it uses the most modern technologies available, combining the capacity of its human resources (Math Engineers

Agency for Management and Technological Innovation (AGITEC)

Carry out activities related to the areas technological prospection and management of scientific-technological knowledge, in addition to being responsible for managing intellectual property in support of the Brazilian Army's Technological Innovation Center. Contribute to create an environment conducive to the development of new Defense systems, as well as for

increase the scientific-technological capacities of the Country and of the Land Force.

It is also part of the Agency's attributions to disseminate and promote the culture of innovation, aiming at a greater participation of Brazilian society in matters of Science, Technology and Innovation of interest to the Ground Force, especially in the development of dual technologies.

EXCHANGE AND COOPERATION WITH OTHER COUNTRIES

The Army has been guiding the effort of international relations in the field of Defense in terms of training, cooperation and integration, according to Brazil's interests in each defense thematic area. Standing out is the growing cooperation with the countries of South America and Africa, and, most notably, the Brazilian Military Cooperation in Paraguay (CMBP), since 1942, when it was initially called the Brazilian Military Instruction Mission in Paraguay (MMBIP).

MILITARY EXERCISES WITH OTHER COUNTRIES (2016/2019)		
Operation/Exercise	Host country	Participating countries
FELINO - 2018	Sao Tome and Principe	Brazil, Angola, Cape Verde, Guinea-Bissau, Mozambique, São Tomé and Príncipe, Portugal and East Timor. Multinational exercise aimed at organizing and exercising a combined joint task force (FTCC) of the CPLP and testing C2 procedures in peacetime in a crisis situation.
PANAMAX – 2017 AND 2018	U.S	Brazil and United States Exercise conducted by the Southern Command of the United States of America (USSOUTHCOM), whose main objective is to carry out combined and joint planning, aiming at the constitution of a Multinational Force to act under authorization of the United Nations Security Council.
OPERATION VIKING – The 2018	Brazil	Brazil, Sweden and the United States. exercise is carried out by the Swedish Armed Forces and representatives of the Brazilian Army, supported by the United States as a strategic partner and aims to train civilian, military and police participants in planning and carrying out a UN mandate.
AMAZONLOG - 2017	Brazil	Brazil, Sweden, United States, France, Japan, China, Russia, Argentina, Peru and Colombia. It is a military exercise in interagency multinational logistics, in a simulation of evacuees and refugees on the triple border between Brazil, Colombia and Peru, which serves to prepare the armed forces for possible disasters and also the situation of support for refugees.
GUARANI - Exercise Triennial (2017 to 2019)	Brazil	Brazil and Argentina It is an exercise developed with a Combined Mechanized Task Force with the participation of troops from Brazil and Argentina.
PARANÁ - Exercise Biennial (2018 and 2019)	Brazil	Brazil and Paraguay It is an exercise developed through a Combined Mechanized Operation, with the use of a General Staff of Unit value and a Subunit.
ARANDU – Exercise Triennial (2018 to 2020)	Brazil	Brazil and Argentina The Exercise emerged from the merger between Exercises HERMANDAD, YAGUARETÉ and DUENDE/SACI, which took place in 2016 and 2017. It is an exercise developed through a Combined Operation Mechanized, Armored, Airmobile and Airborne.

WOMEN IN THE ARMY

In 1943, during World War II, women officially joined the Brazilian Army. 73 nurses were sent, 67 of them

hospital staff and six specialists in air transport.

In 1992, the School of Administration of the Army, in Salvador (BA), enrolled the first



Brazilian Army/ Disclosure

training class with 49 women approved in a public tender.

In 1997, the Instituto Militar de Engenharia enrolled the first group of 10 students for the Military Engineers Board (QEM). Also in 1997, the Army Health School (EsSEx) enrolled and trained the first group of officers

of the Army Health Board.

In 2001, the Army began to accept the registration of women to participate in the public contest to fill vacancies in the Health Sergeants Course, at the Army Health School (EsSEx). As of 2010, the course began to be held at the School of Logistics Sergeants (EsSLog).

In 2013, at the Army Aviation Instruction Center, the first women temporary technicians entered the positions of aviation maintenance and aviation support sergeant.

In 2014, the Army began to accept, also, the registration of women to participate in the public contest to fill vacancies in the Music Contest. In 2015, women were admitted to positions of specialist cables.

In 2017, AMAN enrolled the first cadets, who, in 2021, will be declared the first female combat officers of career in the Brazilian Army.

BRAZILIAN AIR FORCE

The Brazilian Air Force (FAB) had its origins in the aviation of the Brazilian Navy and the Brazilian Army. In 1916, the Navy founded the Naval Aviation School, on the island of Enxadas, in the city of Rio de Janeiro. In 1919, the Army created the Military Aviation School, headquartered in Campo dos Afonsos, in the same city.

In 1932, from Campo dos Afonsos, the first flight of the Correio Aéreo Militar (CAM) departed, still under the auspices of Military Aviation, a service that gave rise to the current Correio Aéreo Nacional (CAN), of enormous importance for national integration.

In 1941, during World War II, the Ministry of Aeronautics was created, born

of the union of air means and human resources of the Army, Navy and the Department of Civil Aviation. Its armed wing was initially called Forças Aéreas Nacionais and, in June of the same year, it was renamed Força Brasileira Air.

The Air Force had its baptism by fire during World War II. It participated in the South Atlantic campaign, in combat against the submarine threat of the Axis, and fought in the skies of Italy, alongside the Allied Forces with the 1st Group of Fighter Aviation and the 1st Squadron

Connection and Observation.

With the creation of the Ministry of Defense in

In 1999, the Ministry of Aeronautics was transformed into the Command of Aeronautics (COMAER).

The challenges to be faced by Brazilian Air Force are proportional to the 22 million km² of its area of operation.

With the continental extension of airspace to be controlled, defended and guarded, combined with the complexity of the current international scenario, multiple challenges are created for the Force, which must be able to respond to the demands with modern and efficient means.



MISSION OF AIR FORCE

Maintain sovereignty over airspace and the national territory, with a view to defending the homeland.

The Air Force acts to prevent the use of Brazilian airspace and outer space for the practice of acts that are hostile or contrary to national interests. For this, it must have effective capacity for surveillance, control and defense of the airspace, over sensitive points and areas of the national territory, with detection, interception and destruction resources.

Likewise, contributing to the development of the Nation, participates in the integration of its territory. To this end, it makes available, whenever possible, its operational and logistical means to take the presence of the State to all parts of the country, in support of federal, state and federal public bodies.

or municipal, as well as in service to public and social policies.

They are, yet, Air Force subsidiaries special assignments:

- n provide for the safety of air navigation;
- n establish, equip and operate aerospace, aeronautical and airport infrastructure under your responsibility;
- n operate the National Air Mail;
- n cooperate with federal agencies in the repression of crimes involving the use

of airspace and airport areas, in the form of logistical support, intelligence, communications and instruction; It is

n preserving the exclusive competences of the judicial police, act, in a manner

continuous and permanent, through actions to control the Brazilian airspace, against all types of illicit air traffic, with emphasis on those related to the trafficking of drugs, weapons, ammunition and illegal passengers.

ORGANIZATION

The Brazilian Air Force has the following organizational structure:

a) A General Management Body:

n General Staff of the Air Force (EMAER).

b) Two Higher Advisory Bodies:

n Air Force High Command; It is

n Superior Council of Economy and Finance.

c) Nine Direct Assistance Bodies and Immediate to the Commander:

n Office of the Air Force Commander (GABAER);

n Air Force Intelligence Center (CIAER);

n Social Communication Center of Aeronautics (CECOMSAER);

n Center for Research and Prevention of Aeronautical Accidents (CENIPA);

n Parliamentary Advisory to the Commander of Aeronautics (ASPAER);

n Historical-Cultural Institute of Aeronautics (INCAER);

n Air Force Internal Control Center;

n Commission for Promotions of Officers of the Aeronautics (CPO); It is

n Airspace Control Operational Safety Advisory (ASOCEA).

d) Seven Sector Management Bodies:

n Preparation Command (COMPREP);

n Aerospace Operations Command (COMAE);

n Support Command (COMGAP);

n Department of Space Control

Air (DECEA); It is

n General Staff Command (COMGEP);

n Department of Aerospace Science and Technology (DCTA).

n Secretariat of Economy and Finance and

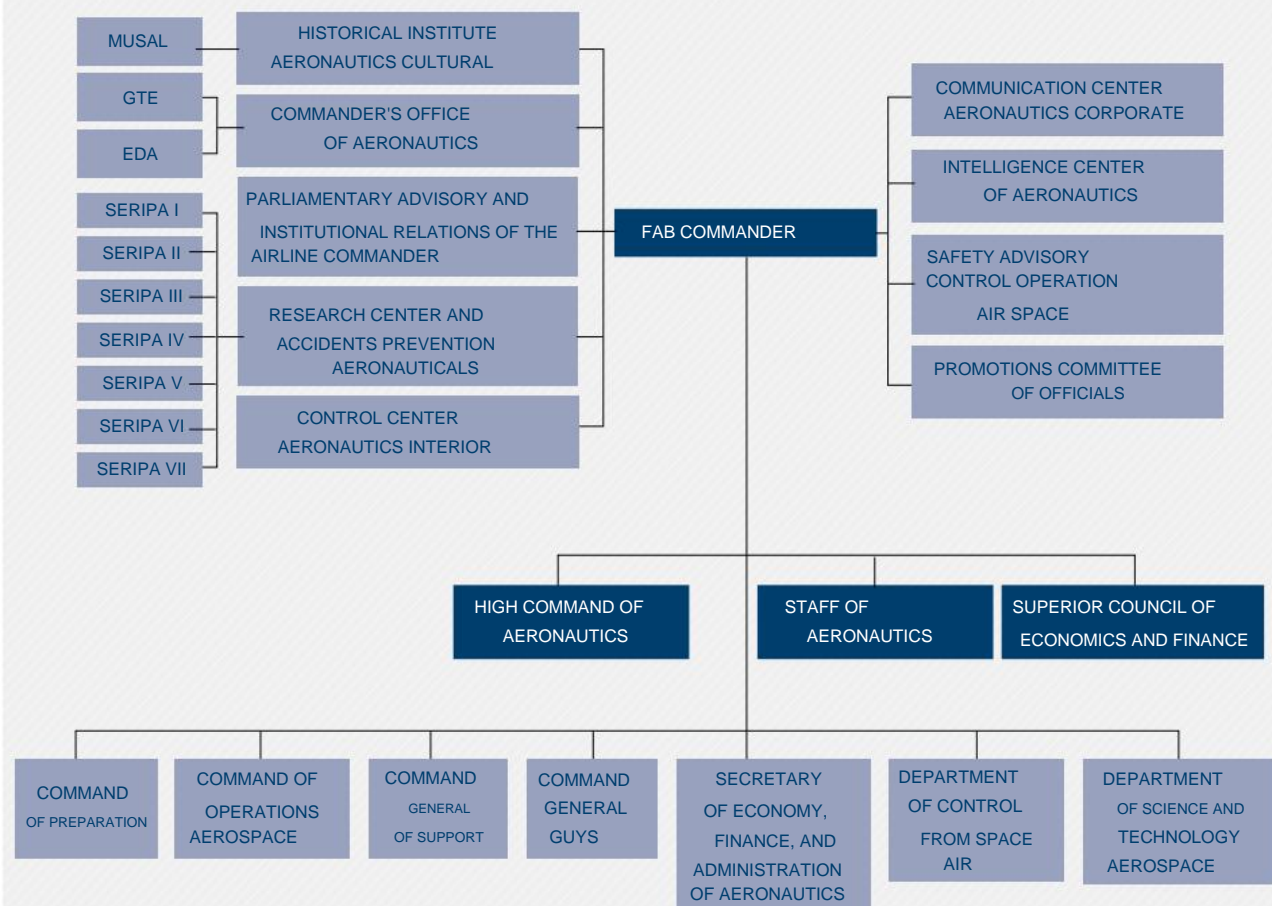
Aeronautical Administration (SEFA);

PREPARATION COMMAND (COMPREP)

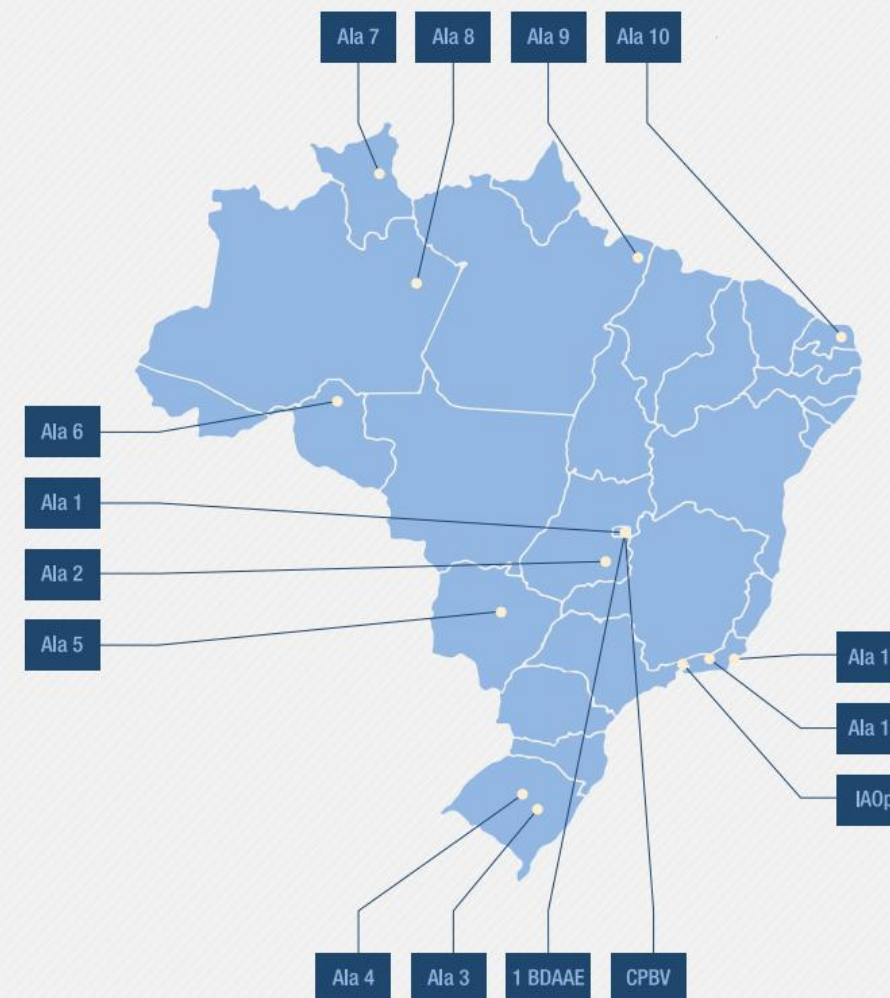
It is incumbent upon COMPREP to carry out the governance of the processes related to the preparation of Air Force assets under its responsibility, its sectorial projects and the strategic projects of COMAER, in its area of responsibility.

acting. Twelve Wings, the 1st Air Defense Brigade (1BDAAE), the Institute of Operational Applications (IAOp) and the Brigadeiro Velloso Proving Ground (CPBV) are subordinate to COMPREP.

CHART OF THE AIR FORCE BRAZILIAN



SUBORDINATE WINGS TO PURCHASE



The Wings are Military Organizations (OM) whose purpose is to carry out the preparation and use of subordinate Military Units, in accordance with the directives, plans and orders of the Superior Commands. They are numbered from 1 to 12, having their headquarters in the cities of Brasília, Anápolis, Canoas, Santa Maria, Campo Grande, Porto Velho, Boa Vista, Manaus, Belém, Parnamirim and two in Rio de Janeiro, respectively.

The 1BDAAE is an OM whose purpose is to prepare and deploy the Anti-Aircraft Defense Units (UDAAE). The Brigade is

located in the city of Brasília.

The IAOp is an OM whose purpose is to conduct the activities of Operational Applications and generate operational knowledge.

It is headquartered in the city of São José dos Campos.

The CPBV is an OM that has the task of providing the administrative and operational support necessary for the execution of trials, tests, experiments and tactical training of interest from COMAER. It has its headquarters in the city of Brasília and has an exercise area located in Serra do Cachimbo, State of Pará.

EDUCATION - MAIN SCHOOLS

Air Force Academy (AFA)

The AFA is the successor institution of the old School of Aeronautics, originally based in Campo dos Afonsos, which, since the creation of the Ministry of Aeronautics in 1941, has been training aviator officers and intendants for the Air Force. In 1971, it was transferred to the city of Pirassununga - SP.

Currently, responsible for the qualification of cadets of the Training Course for Aviation Officers (CFOAV), the Training Course for Intendants (CFOINT) and the Training Course for Air Force Infantry Officers (CFOINF).

This higher level training lasts

of four years and prepares for the initial positions of the career within the respective cadres.

At the end of the senior year, cadets are declared Candidate Officers, and receive, respectively, bachelor's certificates in Aeronautical Sciences with qualification in Military Aviation (CFOAV), in Logistics Sciences with qualification in Intendancy of the Air Force (CFOINT), and in Military Sciences with qualification in Infantry of the Air Force (CFOINF), in addition to being conferred to all of them a bachelor's degree in Business Administration with emphasis in Public Administration.



Air Force Agency/Cb V. Santos

University of the Air Force (UNIFA)

Created in 1983 and headquartered in Rio de Janeiro, UNIFA's purpose is to plan, guide, coordinate and control courses aimed at improvement and high military studies

necessary for the duties of Senior Officers and General Officers. It also offers master's, doctoral and specialization courses, in addition to various internships.

Air Force Command and General Staff School (ECEMAR)

ECEMAR, subordinate to UNIFA, was created in 1947, in Rio de Janeiro, and is the Organization of Higher education military of the Command of Aeronautics whose purpose is to teach courses of higher military studies for Brazilian Air Force Officers and Officers of Nations

Girlfriends. It is also responsible for updating students' knowledge of subjects related to aerospace power, air warfare and senior management of the Force, through the Aerospace Policy and Strategy Internship (EPEA) and the Command and General Staff Course (CEM).

Air Force Officer Improvement School (EAOAR)

Created in 1953, in Guarulhos (SP), and later transferred to Rio de Janeiro, EAOAR's main mission is to improve junior and intermediate officers, aiming at the development of specific skills

for the performance of administrative, advisory and operational functions, through the Air Force Officers Improvement Course (CAP). The School is also subordinate to UNIFA.

Aeronautics Instruction and Adaptation Center (CIAAR)

Created in 1983, in the former premises of the Aeronautics Graduate Instruction Center (CIGAR), in Belo Horizonte, it is currently headquartered in Lagoa Santa (MG). CIAAR is responsible for the training and adaptation of civilians and

military officers for the Brazilian Air Force officers, in the career and enlisted ranks. Among the courses and internships given are career courses for Officers, Doctors, Dentists, Pharmacists, Engineers and Specialists.

Technological Institute of Aeronautics (ITA)

Created in 1950, ITA, headquartered in São José dos Campos (SP), is a specialized university training institute, with undergraduate courses and postgraduate programs in the field of aeronautical and aerospace knowledge. Its purpose is to promote, through education, teaching, research and extension, the progress

of science and technology in these areas. This institute is one of the essential elements for the development of the scientific-technological complex located in Vale do Paraíba, SP. It reports to the Department of Aerospace Science and Technology (DCTA).

School of Aeronautics Specialists (EEAR)

Founded in 1941, it is headquartered in Guaratinguetá, State of São Paulo. Its purpose is to train and improve the sergeants of the

Air Force Command in 28 specialties, currently being the largest teaching complex technician in Latin America.

Preparatory School for Air Cadets (EPCAR)

Headquartered in Barbacena (MG), it was created on March 28, 1949, first as a Preparatory Course for Air Cadets, being named School on May 21, 1950. Its creation sought to meet the emerging needs of the Brazilian Air Force: to prepare future Aviation Officers, intellectually and militarily, with

with a view to joining the Aeronautics School, currently the Air Force Academy (AFA). EPCAR has students enrolled in the three years of high school, maintaining its institutional mission of preparing the future Aviator Cadet of the Brazilian Air Force, through the Preparatory Course for Air Cadets (CPCAR).

SCIENTIFIC AND TECHNOLOGICAL INSTITUTIONS

Institute of Aeronautics and Space (IAE)

The IAE emerged from the merger, in 1991, of the Institute of Research and Development (IPD) and the former Institute of Space Activities (IAE), with the mission of developing scientific-technological solutions to strengthen the

Brazilian Aerospace, through Research, Development, Innovation, Launch Operations and Technological Services in aeronautical, space and defense systems.

Institute for Advanced Studies (IEAv)

The Institute of Advanced Studies was created in 1982, with the functional emancipation of the Advanced Studies Laboratory which, in turn, originated from the dismemberment

of the Division of Advanced Studies of the IAE that took place in 1981. The IEAv started to act as a military organization of the Air Force Command under the then General Command of

Aerospace Technology, today called Department of Science and Technology Aerospace (DCTA), with the purpose of

expand scientific knowledge and mastery of strategic technologies to strengthen the Brazilian Aerospace Power.

Flight Research and Testing Institute (IPEV)

The Flight Research and Test Institute was created in 2011, with the purpose of carrying out flight tests, applied research and training of specialized personnel, with excellence, scientific rigor and safety, in order to strengthen the Brazilian aerospace power. Works in training

of personnel specialized in flight tests and in the provision of services in the field of flight tests, aircraft instrumentation and data telemetry to support research, development and certification of aeronautical products.

Institute of Operational Applications (IAOp)

The Operational Applications Institute is subordinate to COMPREP and was created in 2016.

the respective update of employment doctrine, its purpose is to conduct the activities of

Through research and development in favor of the operational area, as well as planning and conducting Operational Assessments of FAB equipment and operating systems and

Operational Applications and generate operational knowledge, aiming at improving the preparation and employment of the Brazilian Air Force.

Alcântara Launch Center (CLA)

In 1983, the Nucleus of the Alcântara Launch Center - NUCLA was activated, with the purpose of providing logistical support and local infrastructure for launches of vehicles larger than those that the Launch Center

aerospace and data collection and processing of their payloads, perform tests, experiments, basic or applied research, in addition to other development activities technology of interest to COMAER related with the National Policy for the Development of Space Activities (PNDAE).

Barreira do Inferno Launch (CLBI) could withstand. The purpose of the CLA is to: carry out the activities of launching and tracking devices

Barreira do Inferno Launch Center (CLBI)

In 1964, the Working Group of Studies and Special Projects, subordinate to the EMAER, with the purpose of preparing teams specialized in launching rockets, to establish meteorological and ionospheric sounding programs in cooperation with foreign organizations, to encourage private Brazilian industry to climb the steps of space technology, and to choose the location in Brazil and build a rocket launch field there. As a result of this Group, the Center for

Launch of Barreira do Inferno, was created in Natal (RN) in 1965, with the purpose of carrying out and providing support to the activities of launching and tracking aerospace devices and of collecting and processing data from their payloads, and to carry out tests, experiments, basic or applied research and other technological development activities of interest to the Air Force, related to the

FAB's Strategic Conception for Research and Development and with the PNDAE.

Airspace Control Institute (ICEA)

To start the implementation of a Flight Protection System in Brazil, in 1960, the Flight Protection Officer Preparation Course (CPOPV) was created at ITA's facilities. Back in 1966, the course was already being taught in its own facilities, which came to form, in 1978, the Flight Protection Institute, with the responsibility

to carry out studies and projects, in parallel with the main teaching activities. As of 2004, the IPV has been recognized as the Instituto de Controle do Espaço Aéreo – ICEA. Its main purpose is to train human resources and carry out research and

developments under the Brazilian Airspace Control (SISCEAB).

Air Force Logistics Institute (ILA)

In 1988, the Aeronautics Institute of Logistics Nucleus was created, subordinated to the COMGAP, from a conception idealized in 1984, to carry out teaching and training activities related to the logistics area

of aerospace material. Its purpose is to develop the technical and managerial capabilities of FAB professionals, through teaching and research activities related to the area of logistical support.

Institute for Promotion and Industrial Coordination (IFI)

In 1967, the pre-nucleus of the Institute of Industrial Development and Coordination was created, in order to fill the existing production gap between ITA and IPD, which were responsible for Teaching and Research, respectively, according to the trinomial of Professor Richard H Smith, from the Massachusetts Institute of Technology (MIT), technical adviser who worked on the conception of the General Command of Research and Development, today DCTA. A

IFI activation took place in 1971, with the purpose of contributing to guarantee the performance, safety and availability of products and aerospace systems of interest to the FAB, providing services in the areas of Standardization, Metrology, Certification, Technology Transfer and Coordination Industrial, thus promoting the Brazilian aerospace scientific-technological complex.

Department of Aerospace Science and Technology (DCTA)

The Department of Aerospace Science and Technology, which has its origins in 1969, is the sectoral governing body responsible for planning, managing, carrying out and controlling activities related to science, technology and innovation, within the scope of the FAB.

Eleven military organizations are subordinated to the DCTA and, administratively, another four,

bringing together a contingent of around 5,500 military and civil servants, including engineers, researchers and technicians in the most diverse areas. Its main purpose is to develop scientific-technological solutions in the field of Aerospace Power, in order to contribute to the maintenance of airspace sovereignty and national integration.

EXCHANGE AND COOPERATION WITH OTHER COUNTRIES

The Air Force maintains a series of exchange and cooperation activities with other Nations, especially with the countries of America southern. It is worth mentioning the Aeronautical Technical Mission Brasileira (MTAB) in Paraguay established in

1982, with the objective of providing technical, operational and administrative advice to the Air Force of that country. In the following, will be presented the most relevant areas.

MILITARY EXERCISES WITH OTHER COUNTRIES (2016/2019)		
Operation/Exercise	Host country	participating countries
COOPERATION	Chile	Brazil, Chile, Argentina, Canada, United States, Peru and Uruguay
		Multilateral exercise of integration and simple action, which involves the Air Forces that are part of SICOFAA, in processes of planning, execution and control of operations in situations of natural disasters and humanitarian aid.
FELINE	Brazil	Brazil, Portugal, Angola, Cape Verde, Mozambique, Guinea-Bissau, Equatorial Guinea, São Tomé and Príncipe and East Timor.
		Multilateral exercise of integration and simple action, which involves the Air Forces that are members of SICOFAA, in processes of planning, execution and control of operations in a Combined Joint Task Force Exercise (FTCC), within the scope of the CPLP, to achieve, maintain and optimize the ability to intervene in peace support and/or humanitarian aid missions, at operational and tactical levels, under the auspices of the UN.
AMAZONS	Brazil	Brazil, Colombia and Peru
		Training exercise between Air Forces and Civic-Social Actions.
PANAMAX	Panama	Brazil, USA, Chile, Colombia, Mexico, Paraguay and Peru
		Multinational exercise focused on the security of the Panama Canal and the surrounding region
EATT	Portugal	Brazil and Portugal
		Training exercise for transport aviation.
BRAPOR	Portugal Brazil and Portugal	Exercise of Search and Rescue, Maritime Patrol, Anti-submarine and Air Reconnaissance missions for Patrol Aviation.
MAPLE FLAG	Canada	Brazil, Canada, USA, France, Australia, Belgium, Saudi Arabia, Peru and Qatar
		Multinational exercise, held annually, organized by the Armed Forces of Canada, with the purpose of planning and training joint and combined operations, in a conventional war scenario.
MOBILITY GUARDIAN	USA	Brazil, USA, Australia, Belgium, Canada, Colombia, France, New Zealand, Pakistan, South Korea and the United Kingdom
		Exercise builds on a contingency response with subsequent mobility operations in a semi-permissive/contested environment in response to a natural disaster in a troubled region of the world.
REAL THAW	Portugal	Brazil and Portugal
		Interservice Interoperability Training Exercise

ANGEL DE LOS ANDES	Colombia	Brazil and Colombia
	Exercise of coordination, command and control and execution of search and rescue operations and personnel recovery.	
CRUZEX	Brazil	Brazil, Canada, Chile, USA, France, Peru, Portugal and Uruguay
	Biennial multinational exercise in Brazil, organized by the Brazilian Air Force, with the purpose of planning and training combined operations, as well as promoting military cooperation between participating nations.	
GREEN FLAG	USA	Brazil, USA, Canada, France, Germany and UK
	Air-ground forces integration exercise in unconventional warfare scenarios.	
LION EFFORT	Sweden	Brazil, Sweden, Hungary, Czech Republic, Thailand and South Africa
	Joint Exercise between the countries operating the Gripen aircraft.	
PEGASUS	Argentina	Brazil, Argentina, Uruguay, Chile, Peru and Colombia
	Multilateral exercise for planning, executing and controlling operations in situations of natural disasters and humanitarian aid.	
RED FLAG RESCUE	USA	Brazil, USA, Australia and UK
	Multinational exercise focused on training combat rescue missions and close air support.	

WOMEN IN THE AIR FORCE

The Air Force created the Female Air Force Reserve Corps (CFRA) in 1981, absorbing, in the following year, its 1st group, in Campo dos Afonsos, in Rio de Janeiro.

the highest ranks within the Force, the entry of women began in 1996, in the Training Course for Quartermaster Officers. In 2006, the Air Force formed the first group of

At that time, 150 women joined the Air Force - psychologists, nurses, systems analysts, social workers, speech therapists, nutritionists, librarians, —, selected from north to south of the country. Women, therefore, have been part of Air Force management life for three decades.

Brazilian military aviators. In the ranks of aviators, intendants, health and aeronautical engineers, women in the Air Force can rise to the rank of general officer (Brigadier), running for this under identical conditions to male officers. The power

At the Air Force Academy, where soldiers who can reach Aérea Brasileira has, today, in its staff, with about twelve thousand women.



Flight instruction at AFA | Air Force Agency/Sgt. Johnson

EXAMPLES OF USE OF THE MILITARY INSTRUMENT

BRAZIL'S PARTICIPATION IN THE GREAT WORLD WARS

World War I

Brazil's participation in World War I World Cup was motivated by a series of attacks to Brazilian merchant ships in the Atlantic North. In April 1917, it was sunk

the Merchant Ship "Paraná" in the vicinity of the English Channel, which motivated the Brazilian government to break diplomatic relations with Germany. During the months that followed,

three other Brazilian merchant ships also were sunk by German submarines, which determined the recognition of the state of war with the German Empire on October 26 of 1917. President Wenceslau Brás signed alliance with the countries of the Triple Entente and, even without an expressive war capacity, Brazil supported them logistically by sending agricultural supplies and raw materials.

In compliance with the commitments assumed at the Interallied Conference, the Brazilian government sent a Military Medical Mission composed of civilian and military doctors to work in a military hospital set up in the French capital, Paris. A contingent of Navy and Army aviators joined the Allied Air Forces, and part of the Fleet was also mobilized for anti-submarine warfare.

In order to fulfill the Navy's attributions, it was decided to organize a task force called the "Naval Division in War Operations" (DNOG), consisting of ships withdrawn from

of the divisions that formed the Brazilian squadron. The following became part of DNOG: the cruisers "Rio Grande do Sul" and "Bahia", the destroyers "Piauí", "Rio Grande do Norte", "Paraíba" and "Santa Catarina", the supply ship "Belmonte" and the tugboat "Laurindo Pitta". The total naval contingent was about 1,500 men. the division was

tasked with patrolling the area comprised by the maritime triangle, whose vertices were the city of Dakar, on the African coast, the island of São Vicente, in the Cape Verde archipelago, and Gibraltar, at the entrance to the Mediterranean.

During their stay in the Theater of Operations, the DNOG crew was exposed to the Spanish flu virus, brought by European ships to the West African coast. Even suffering hundreds of casualties due to the epidemic, with 156 fatalities, DNOG did not fail to fulfill its mission until the armistice, on 11

November 1918.

World War II

Brazil's participation in the Second World War was strongly motivated by the successive attacks on Brazilian merchant ships by Axis submarines that led to the death of 982 crew members and passengers between March 1941 and October 1943. Responding to popular pressure for the deaths of 607 people in six torpedoings of ships dedicated to cabotage lines between 15 and 19 August

1942, Brazil declared war on the Axis at the end of the same month. The country's participation in this conflict was more expressive than that which occurred in the First War.

The Navy had control of the lines of navigation between the Caribbean and South America, acting in the escort of ship convoys merchant ships and in patrolling against Axis submarines and warships in conjunction with

US Navy ships and aircraft States of America in the Atlantic Campaign.

The protection provided to merchant shipping Allied in the South Atlantic allowed the constant commercial flow of commodities for the North American industries, contributing to the war effort, and the maintenance of the supply of the

national economy, dependent on sea transport for regional trade and fuel imports. The Navy also participated in joint and combined operations, including air-naval patrols and port defense actions to prevent attacks by the Axis.

on Brazilian soil.



Torpedoing of the Merchant Ship "Buarque" - 1942



Navy Warship facing a Submarine

The Army sent about 25,000 men to fight in Europe against the Axis. The Brazilian Expeditionary Force (FEB) was part of the Fifth US Army.

After heavy losses, the first successful operation of the FEB was the attack on the fortified position of Monte Castelo, which was occupied and garrisoned by a highly qualified enemy division.

In continuation of the success obtained, the

FEB carried out its subsequent missions with equally expressive results. The first opposing force to surrender in Italy did it to the members of the FEB, the famous "Cobra Fumando". During the campaign in Italy, in World War II, the FEB took more than 20,000 prisoners.

The Air Force was created during the Second World War, in 1941. In 1942, it began its engagement in the Maritime Air Patrol of the

Brazilian waters. In 1943, the 1st Fighter Aviation Group was created. That same year, an Axis submarine was sunk by an Air Force plane off the coast of Rio de Janeiro.

The 1st Fighter Aviation Group operated in Italy from 1944 and was part of the US 350th Fighter Group, performing over 2,000 missions and standing out as one of the three units foreign airlines to be awarded with a distinction from that country (Presidential Unit Citation).

It is also worth mentioning the participation, in Italy, of the 1st Liaison and Observation Squadron, which operated alongside the Divisional Artillery, both units of the Brazilian Expeditionary Force.

In this joint operation, the aircraft crews were composed of Air Force pilots and Army aerial observers, whose task was to regulate artillery fire.



Representation of the Brazilian soldier in World War II



FEB symbol "The smoking snake"



Representation of FAB aircraft in World War II



Symbol of Brazil's participation in World War II

BRAZIL'S PARTICIPATION IN PEACE OPERATIONS

Since 1947, the country has participated in UN peacekeeping missions, having already contributed with more than 58,000 military and police officers. Integrated operations in Africa (Angola, Congo, Ethiopia, Ivory Coast, Liberia, Mozambique, Central African Republic, Democratic Republic of Congo, Western Sahara, Syria, Senegal, Sudan, South Sudan and Uganda/Rwanda), in the Caribbean and in Central and South America (Costa Rica, El Salvador, Ecuador, Guatemala, Haiti, Honduras, Nicaragua and Peru), in Asia (Cambodia, Asia and Timor-Leste), in Oceania (New Guinea) and in Europe and the Middle East (Greece, Gaza Strip, Cyprus, Croatia, Iraq, Lebanon, Serbia, Bosnia and Herzegovina, Kosovo, East Slavonia, Macedonia and Montenegro).

Brazil provided troops and/or military means in Suez (UNEF-I), Congo (ONUC), Dominican Republic (FIP/OAS), Angola (UNAVEM III), Mozambique (ONUMOZ), Timor-Leste (UNTAET/UNMISSET), Haiti (MINUSTAH) and, more recently, in Lebanon (UNIFIL).

Brazil's participation in the Stabilization Mission of the United Nations in Haiti (MINUSTAH), which ended in September 2017, with the participation of approximately 36,500 military personnel, demonstrated the importance that the Country attributed to the stabilization in Haiti, the strengthening of multilateralism, the integration of Latin America and solidarity as a principle of international action.

The excellent performance of the Brazilian military was recognized by the Haitian people and by international authorities, due to the peculiar way of acting, a reflection of the training received before the mission and the professional training acquired in the Forces.

The peacekeeping mission also provided the participating Forces with the opportunity to improve their operational and logistical systems, as well as maintain exchanges with troops from other countries.

Another Brazilian participation with troops in peace missions is the presence of Brazil in the United Nations Interim Force in Lebanon (UNIFIL).

UNIFIL was created in 1978 with the purpose of maintaining stability in the region during the withdrawal of Israeli troops from Lebanese territory.

The UNIFIL Maritime Task Force (MTF) was established in 2006, the first Naval Task to integrate a UN Peacekeeping Mission, whose mission is to prevent the entry of illegal weapons into Lebanon, as well as how to train the soldiers of the Lebanese Navy. O command of the UNIFIL FTM, as of February 2011, has been exercised by a Brazilian Admiral and, since November 2011, a Brazilian Navy ship (Frigate or Corvette) has been incorporated into the UNIFIL FTM, exercising the function flagship. The relay of this

naval environment takes place every six months.



As of 2014, also in a six-month rotation system, seven Brazilian Army soldiers were integrated into the General Staff of the Brigade of the Eastern Sector (Spain), featuring the first Brazilian terrestrial mission within the scope of UNIFIL.

Brazil also has the participation

of a General Officer as Commander of the Military component (Force Commander) in the United Nations Multidimensional Integrated Stabilization Mission in the Democratic Republic of Congo (MONUSCO), since May 2018.

COORDINATION OPERATIONS WITH AGENCIES

Agata Operations are a recent example of federal troop employment in favor of security, in accordance with the legislation. This activity, carried out on the border strip in partnership with other Ministries and Government Agencies, is a joint operation of the Brazilian Armed Forces aimed at combating cross-border and environmental crimes. It is also an interagency operation as it is carried out in coordination with other federal and state agencies. The operation was designed within the framework of the Strategic Border Plan and the Integrated Border Protection Program, whose main objectives are to neutralize organized crime, reduce crime rates, cooperate with border countries and support the population in

border strip.

The Armed Forces also acted, with logistical support, in areas of indigenous lands, in reinforcement of the Public Security Agencies, given the social problems in the area, which pose a risk to sovereignty and national cohesion.



Subsidiary Shares | Brazilian Army/ Disclosure

DEFENSE AND SOCIETY

The Defense Sector has as its main mission the preparation of the Armed Forces for employment in their constitutional purpose of defending the Homeland and guaranteeing constitutional powers and law and order, however, Complementary Law nº 97/1999 establishes that the Armed Forces must carry out subsidiary attributions, in order to cooperate with national development and civil defense, and also conferred other particular attributions, such as collaborating with public safety and security in the border strip, through preventive and repressive measures, in coordination with other government agencies.

On the other hand, there is also the understanding, within the scope of the Defense Sector, of its

social responsibility, the need to expand interaction with Brazilian society in a country that still has a population lacking in basic areas. Therefore, projects and actions are developed that have objectives aimed at these purposes.

The Defense Sector is also aware of the need to increase Brazilian society's perception of the importance of issues relating to National Defense. To this end, it develops projects in partnership with other government bodies or civil society, in order to generate an adequate culture of defense in the country.

scope of Brazilian society.

SUBSIDIARY ATTRIBUTIONS

The Forces participate and act directly with different segments of society, such as the use of Army engineering in the construction of roads, railways, bridges and dams; in aeromedical evacuation in remote regions, carried out by the Brazilian Air Force (FAB); and in the health support provided by the Navy's hospital ships. Mention should also be made of humanitarian support in the event of accidents and calamities, such as aircraft crashes, vessel sinking, floods, landslides or prolonged droughts.

The Defense maintains close cooperation with the Electoral Justice. At the request of the Superior Electoral Court (TSE), logistical support is provided

for holding elections. The military units of the Armed Forces, present in all regions of the country, have a deep relationship with the communities in which they form part. The military participate in the life of the population, either through involvement in events

communities, through civic-social actions, public health campaigns and support in cases of calamity.

In addition to general subsidiary attributions, LC No. 97/1999 provides for the use of the Armed Forces in the following particular subsidiary attributions:

n control and provision of maritime security;

n territorial control, mainly along the border;

n integrated control of Brazilian airspace; It is

n environmental control and protection.



Air Force Agency/Disclosure

BRAZILIAN NAVY (MB) AND ITS ACTIONS

The Brazilian Maritime Authority (AMB), exercised by the Commander of the Navy (CM), has competence to deal with matters that fall to the MB as subsidiary attributions, which are those conferred by legal rule and

Control and Provision of Maritime Security

At MB, the Board of Ports and Coasts and the Board of Hydrography and Navigation the elaboration and approval of Rules of the Maritime Authority related to its competences, thus contributing to the fulfillment of the tasks assigned to the AMB.

The Board of Ports and Coasts has the purpose of contributing to the guidance and control of the Merchant Marine and activities correlated, cooperating for the safety of waterway traffic; the prevention of pollution by vessels, platforms and their support stations; the formulation and execution of national policies concerning the sea; the implementation and supervision of the

that are not related to the defense of the homeland and the guarantee of constitutional powers, law and order, as established in the Federal Constitution.

compliance with laws and regulations at sea and inland waters; and the authorization and qualification of personnel for the Merchant Navy.



Brazilian Navy/Disclosure

The Board of Hydrography and Navigation carries out activities related to hydrography, oceanography, cartography, meteorology, navigation and nautical signaling; guarantees the quality of the security activities of the

Search and Rescue

MB implemented, organized and operates the Maritime Search and Rescue Service. This service aims to respond to emergencies related to the safeguarding of human life at sea, which may affect navigators at sea and on inland waterways.

The Brazilian Maritime Search and Rescue Service is organized in accordance with rules defined and regulated by the Organization International Maritime Organization (IMO), which include the service to the Global Maritime System of Help and Safety (GMDSS); Disclosure of Maritime Safety Information (MSI); the establishment of a Search Region and

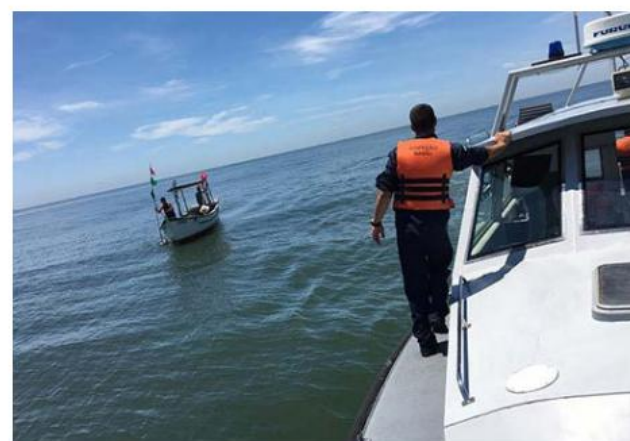
Salvage (SRR); the existence of centers SAR Coordination (MRCC/RCC), as per

Hospital care in the Amazon

The voyages that Assistance Ships Hospital (NASh) of the MB perform for the Amazonia, serving the population in poorer riverside locations in that region, are called Hospital Assistance Operations for the Riverside Population, or simply ASSHOP. The regions to be visited are called Health Centers.

navigation in the maritime area of interest to Brazil and in inland waterways; and contributes to national research projects in Brazilian jurisdictional waters and to those resulting from international commitments.

necessary; adequate means to respond to SAR emergencies; and the organization of a Ship Information System. When necessary, coordination is carried out with the Aeronautical Search and Rescue System.



Brazilian Navy/Disclosure

ASSHOP are held in the localities riverside communities most in need of care health of the Poles visited. This shortage is resulting from the distance from urban centers Of region; the lack of public or private health services; and the lack of basic sanitation infrastructure (drinking water and treated sewage). These conditions

adverse conditions result in a precarious health situation for the riverside population.

The NASh, and before them the Corvettes that MB

has in the region for more than forty years, are known by the riverside populations as the "Ships of Hope".



Brazilian Navy/Disclosure

BRAZILIAN ARMY AND ITS ACTIONS

Border Security

In land border areas, the Army acts, in coordination with the other Armed Forces and government agencies, in the prevention and repression of cross-border and environmental crimes. Actions or operations are carried out to curb crimes such as drug trafficking, smuggling and embezzlement, arms and ammunition trafficking, environmental crimes, illegal immigration and mining.

To strengthen the Brazilian military's ability to act along the 16,886 km of the country's land border, the Army invested in

creation of SISFRON - Integrated System of Border Monitoring.

The project, started in 2012, provides for the implementation of an integrated set of technological resources – such as surveillance and monitoring systems, information technology, electronic warfare and intelligence.

In addition to expanding monitoring capacity, mobility and presence along the border, SISFRON will contribute to greater regional integration, between government agencies and also with neighboring countries.

Support for society and contribution to national development

The Army carries out activities of character temporary, episodic or scheduled assistance and aid to underprivileged communities different regions of the country, at different levels of command, taking advantage of the human, material and technical resources available to solve immediate and pressing problems.

It also carries out, with Engineering, construction work on roads and railways, dams and others that collaborate with national development.

The Institution also supports civil defense activities, participating in rescue and assistance to victims of natural disasters.



Brazilian Army/ Disclosure

BRAZILIAN AIR FORCE AND ITS ACTIONS

Integrated Control of Brazilian Airspace

The airspace under the responsibility of the country extends beyond its borders. It exceeds the area over its territory and reaches a significant part of the Atlantic Ocean, making a total of 22 million km², over land and sea, agreed in international treaties. In Brazil, air control assumes gigantic proportions, which makes it a strategic and National Security attribution, entrusted by law to the Brazilian Air Force.

The Department of Air Space Control (DECEA) is the Air Force Command organization responsible for controlling this area. It brings together human resources, equipment, accessories and infrastructure with the mission of providing safety and fluidity for flights in the region.

In this way, the evolution of air traffic flow in the national airspace is controlled, on a daily basis, by four large operational bases, subordinated to DECEA: the integrated centers of air defense and air traffic control

airline, also known as CINDACTA.

They act on subdivisions of airspace called flight information regions, Flight Information Region (FIR). In Brazil, there are five FIRs, over which four

CINDACTA:

- n CINDACTA I (Brasília – DF) – Responsible for FIR Brasília, which covers the central region of Brazil;

- n CINDACTA II (Curitiba – PR) – Responsible for FIR Curitiba, which covers the south and part of the center-south of Brazil;

- n CINDACTA III (Recife – PE) – Responsible for the Recife and Atlântico FIRs, which cover the Northeast and area overlying the Atlantic; It is

- n CINDACTA IV (Manaus – AM) – Responsible for FIR Manaus, which extends over a large part of the Amazon region.



CINDACTA / Disclosure

At the same time, CINDACTA unites civil air traffic control and military air defense operations, a successful integration solution that has been recommended by the International Civil Aviation Organization (UN body that regulates the activity) to the other signatory countries, as a cost-saving model

Aeromedical Evacuations

The Brazilian Air Force (FAB) performs, when necessary, aeromedical evacuations in support of the population residing in difficult-to-access areas of the National Territory, maintaining trained personnel (doctors, nurses and nursing technicians) in conditions to carry out this difficult operation in a country with continental dimensions like Brazil.

resources and operational security. In addition to CINDACTA, there is also the São Paulo Regional Flight Protection Service (SRPV-SP), responsible for controlling traffic with the highest flow density in the country, along the air terminals of São Paulo and Rio de Janeiro.



Air Force Agency/Sgt. Luiz

Search and Rescue

The FAB has a squadron specially trained to carry out SAR missions: the Second Squadron of the Tenth Aviation Group – Pelicano (2nd/10th GAV), located in Campo Grande (MS). Other squadrons also do search missions, as long as they have their crews with specific training. All

Helicopter units also carry out rescue missions. Pelicano operates SC 105 Amazonas planes and H-1H helicopters, always keeping a plane and a helicopter on alert for takeoff in a few minutes, equipped to respond to any emergency situation, be it

on land or sea.

Transport of Organs

The Navigation Management Center Aérea (CGNA) has been carrying out, for about five years, the work of coordinating flights and

facilitation of all steps involved in the process of air transport of organs to be transplanted. The CGNA is responsible for coordinating

distribution, by means of air transport, of organs for transplantation in Brazil. For this, the unit has two positions of the National Transplant Center (CNT) in its Hall Operational, 24 hours a day.

Once the demand is received, the professionals assigned to the CGNA begin the search for the closest suitable flight, which serves the required route. The rule is the use of commercial aviation flights. When the stretch is not served by an airline, the FAB's Aerospace Operations Command (COMAE) enters the scene, which, when activated,

enables a military aircraft.

Since the regulation of the removal of organs for transplantation and authorization of the support provided by the FAB in this type of mission, in June 2016, the activations, which occur at any time of day and night, have intensified.

Currently, the air transport squadrons have crews on duty in Belém (PA), Recife (PE), Galeão (RJ), Guarulhos (SP), Canoas (RS), Brasília (DF) and Manaus (AM), but nothing prevents missions of this type from being carried out by other FAB squadrons.



Air Force Agency/ Sgt. Johnson

COORDINATED SOCIAL PROGRAMS BY THE MINISTRY OF DEFENSE

The Ministry of Defense and the Brazilian Armed Forces have a long tradition of carrying out projects and actions that contribute to the promotion of citizenship. In this regard,

develop projects that collaborate with public policies that aim to improve the well-being of the needy population and reduce the deficit Brazilian social.

CITIZEN SOLDIER PROJECT

The project is intended to socially and professionally qualify recruits who provide the service militar³, complementing citizenship training and facilitating entry into the job market.

The initiative has existed since 2004 and covers the entire national territory, having already benefited thousands of young people. The courses, taught by civil institutions of recognized competence, include basic notions of entrepreneurship, ethics and citizenship. Courses are offered according to the demand of the regional labor market, taking into account the youth's preference.

Priority is given, among others, to the following training areas: telecommunications, mechanics, food, civil construction, graphic arts,

clothing, textiles, electricity, commerce, communication, transport, information technology and health.



Ministry of Defense/Disclosure

NORTH CUT PROGRAM (PCN)

The PCN was created in 1985 by the Federal Government with the aim of contributing to the maintenance of National Sovereignty and Territorial Integrity. Since 1999, it has been coordinated by the Defense Ministry.

In the development of the Program, funds are transferred from parliamentary amendments. Thus, agreements are signed with states and municipalities in the region covered, with the aim of contributing to sustainable development, providing basic infrastructure, paving urban roads, electricity, schools, day care centers, health clinics, community centers, sports courts, among others. others, to a population

residing in a municipality characterized by a low human development index (HDI) and marked by difficult access to goods and services and the absence of public power. The Program has already invested, since its creation until today, approximately 3 billion reais in favor of regional development.

The Calha Norte covers almost 400 municipalities, distributed in eight states: Acre, Amapá, Amazonas, Mato Grosso, Mato Grosso do Sul (border area), Pará, Rondônia and Roraima.

In all, almost twelve million Brazilians benefited, including 42% of the indigenous population – in an area that corresponds to 45% of the National Territory.

STRENGTHS IN SPORTS PROGRAM (PROFESP)

PROFESP is developed by the Ministry of Defense in partnership with other ministries and with the support of the Armed Forces. Its general objective is to promote social integration through sports. Among the activities carried out by the Program, in addition to educational and leisure sports, the following stand out: tutoring, disease prevention and general educational guidance. Efforts are focused on social inclusion, valuing citizenship and practical professional guidance activities that facilitate future insertion in the job market.

Currently, approximately 29,000 children, young people and adolescents between 6 and 18 years old, in 90 municipalities in 25 states and the Federal District, who attend activities after school hours.

The Armed Forces provide infrastructure, medical, dental and social assistance services, coordinators, transport and monitors of the Military Organizations of the Navy, Army and Air Force. The participation of other Ministries makes it possible to supply sports material, uniforms, pay teachers and monitors, and food.

³ Military service, instituted by the first Brazilian Constitution in 1824, constitutes a space for integration between all Brazilian social groups and their Armed Forces. The National Defense Strategy seeks to value military service, emphasizing its social character and the promotion of citizenship. Military service is open to any citizen, regardless of social class, race or religious creed.



Brazilian children and youth members of PROFESP | Tereza Sobreira

JOÃO DO PULO PROJECT (PJP)

The name of the Project pays tribute to one of the greatest Brazilian sportsmen, João Carlos de Oliveira, known as "João do Pulo". He was a soldier and athlete, specialized in jumps, being a former triple jump world record holder, medalist

Olympic and four-time Pan American champion in the triple and long jump. His career was ended, due to a car accident that caused the loss of one of his legs.

Initially intended for military personnel who acquired physical limitations throughout their careers, the "João do Pulo Project" is receiving a new focus in scope with the purpose of promoting personal appreciation, strengthening social integration, citizenship and reducing social risks. beneficiaries, through access to the practice of healthy sports and physical activities and socially inclusive activities, to be developed within the scope of the Navy, Army and Air Force, in their Military Organizations that have adequate facilities for para-sporting activities.

The new version is aimed at customer service of people with disabilities (PwD), prioritizing children, adolescents and young people, from the age of six, in a state of social vulnerability, and will start operating through its Parasports Activity Centers (NAP), implemented in 2019, in Rio de Janeiro (RJ), in the following units: Almirante Adalberto Nunes Physical Education Center, Army Physical Training Center, Air Force Sports Commission, Military College of Rio de Janeiro and Military College of Brasília.

HIGH PERFORMANCE ATHLETES INCORPORATION PROGRAM (PAAR)

The PAAR, carried out by the Ministry of Defense in partnership with the Ministry of Citizenship, began in 2008, with the aim of strengthening Brazilian military teams in high-level sporting events, conducted by the International Military Sports Council

(CISM) and by the Southern Military Sports Union Americana (UDMSA).

Enlistment is voluntary and selection takes into account the results of athletes in national and international competitions. In this way, the medals already won in the career are transformed into scores in the selection process to fill vacancies.

Athletes have at their disposal all the benefits of their career, such as salary, 13th salary, vacations, right to medical assistance, including

nutritionist and physiotherapist, in addition to having all the appropriate military sports facilities for training at the Navy (Almirante Adalberto Nunes Physical Education Center – CEFAN), Army (Army Physical Training Center and Deodoro Sports Complex) and Air Force centers (University of the Air Force – UNIFA).

At the Rio 2016 Olympic Games, the Ministry da Defense surpassed the established goals, by classifying 145 military athletes to integrate the Olympic teams and winning 13 medals, of the 19 obtained by Team Brasil. The numbers were higher than London in 2012.

In light of the results obtained in that edition of the Olympic Games, the Ministry of Defense works towards the Olympic Games in Japan.



The High Performance Program integrates more than 600 athletes | Ministry of Defense/ Sgt Alexandre Manfrim



RONDON PROJECT

The Rondon Project is a government action Federal, coordinated by the Ministry of Defense and conducted in partnership with other Ministries, State and Municipal governments and Higher Education Institutions (HEIs). The Armed Forces provide fundamental logistical support for operations, as well as provide adequate security conditions for all participants, enabling the execution of planned actions.

The name of the Project pays homage to the Marshal Cândido Mariano da Silva Rondon (1865-1958), who was a military sertanista and engineer, famous for his exploration of the Mato Grosso and the Western Amazon Basin and for his lifelong support of Brazil's indigenous populations.

The Project has the following objectives:

- to contribute to the development and strengthening of student citizenship

- College students;

- to cooperate with the sustainable development of the municipalities where the actions are carried out; It is

- to cooperating with the improvement of the social well-being and quality of life of local populations, taking advantage of competences and projects developed in the school environment by university students and their professors, called "rondonistas".

The first operation, called Operation Pilot or Operation Zero, was held in July 1967 and had the participation of 30 students and 02 university professors from the then University of the State of Guanabara, from the Fluminense University and the Pontifical Catholic University of Rio de Janeiro. During 28 days, rondonistas carried out survey, research and medical assistance work in the Territory of Rondônia.



Marshal Cândido Mariano da Silva Rondon



Rondon Project activities

Ministry of Defense/Rondon Project Collection

Annually, around a thousand university students are displaced to municipalities with a low Human Development Index (HDI), for a period of 15 days. The selection of participating HEIs is based on the evaluation of the projects presented, and those that offer greater effectiveness and are suitable for the target municipalities of the actions are chosen.

The actions carried out are aimed at, priority, for the agents that will be the multipliers and implementers of the

acquired knowledge, such as employees in the areas of health, agriculture, basic sanitation, among others. They are the main instruments that will allow the continuity of the use of techniques transmitted by the "rondonists".

The Project has already enabled more than 20,000 university students to participate in actions in more than 1,000 Brazilian municipalities.

More information about the Rondon Project can be obtained from the page <https://projectorondon.defesa.gov.br/portal/>.

DEFENSE AND ACADEMY

The Ministry of Defense develops programs, projects and activities that aim to collaborate with the National Defense Objective number 6 – OND 6 ("Increase the involvement of Brazilian society in matters of National Defense"). The development of these actions aims to increase the perception

of Brazilian society, mainly the academic environment, about the importance of National Defense for the Country. Thus, the aim is to increase the carrying out of research, debates and events, in order to generate a solid culture of Defense within the scope of Brazilian society

SUPPORT PROGRAM FOR TEACHING AND SCIENTIFIC RESEARCH AND TECHNOLOGY IN NATIONAL DEFENSE (PRO-DEFENSE)

Created in 2005, based on an agreement signed with the Coordination of Improvement of Higher Level Personnel (CAPES), Pró-Defesa is an initiative that seeks to foster cooperation between civilian and military Higher Education Institutions, with a view to implementing research projects

scientific-technological, aimed at training specialized personnel in the area of National Defense, thus contributing to the development and consolidation of Brazilian thinking in the area.

In 2019, the fourth edition of the Pro Defense, lasting four years.

ACADEMIC CONGRESS ON NATIONAL DEFENSE (CADN)

It is an educational activity whose target audience is university students from civil educational institutions. It takes place in partnership with the main training schools for officers of the Armed Forces: Naval School, Academia Militar das Agulhas Negras and Academia da Força Aérea. Held annually, the Academic Congress aims to stimulate reflection

and the discussion of matters relating to Defense

Nacional, as well as the presentation of academic works that deal with the subject. The event is composed of lectures, study groups and debates, providing a fruitful interaction between professors and students from civil and military institutions. Annually, the Ministry of Defense publishes, in a notice, the conditions for the qualification of higher education institutions interested in participating in the meeting.

EXTENSION COURSE IN NATIONAL DEFENSE (CEDN)

CEDN is an activity that takes place in partnership with Higher Education Institutions (HEIs) across the country. The project aims to encourage of reflection and studies of National Defense, in addition to the dissemination of knowledge in the area of the society. The course classes are taught by experts appointed by the Ministry

of Defense and by professors and speakers suggested by the partner HEIs. The extension totals 20 class hours and students who have at least 75% attendance are certified. The course is free and intended for undergraduate and graduate students, as well as interested individuals. on the subject of National Defence.

CONTEST FOR MONOGRAPHS AND DISSERTATIONS AND THESES ON NATIONAL DEFENSE

Through the Competitions for Monographs and Dissertations and Theses, the Ministry of Defense seeks to stimulate the production of studies and academic research on the theme of Defense and International Security, in particular

in the civilian environment. The contests award undergraduate monographs, master's dissertations and doctoral theses, approved in the areas of Human Sciences, Applied Social Sciences and similar areas.

BRAZILIAN ANTARCTIC PROGRAM (PROANTAR)

The scientific activities of PROANTAR, created in 1982, are proposed and developed by scholars from universities and research institutions from different regions of Brazil.

In an interdisciplinary and inter-institutional way, researchers conduct investigations in the areas of earth sciences,

atmosphere, life sciences and also in the technological area. The projects include research on environmental changes in Antarctica and their global impacts, environmental monitoring and complementary studies on the local fauna and flora, among others.



Polar Ship Almirante Maximiano and Oceanographic Support Ship Ary Rongel | Brazilian Navy/Disclosure

Ministry of Defense/ Sgt Alexandre Manfrim

The research involves a large number of Brazilian scientists, with varied specializations and from different teaching and research institutions, who develop their activities in the Antarctic continent, using the Comandante Ferraz Antarctic Station – EACF and the MB ships (Navio de Oceanographic Support Ary Rongel and Polar Ship Almirante Maximiano).

Structured in three areas: Science and Technology, under the responsibility of the Ministry of Science, Technology, Innovations and Communications; Environmental, inherent to the Ministry of the Environment; and Logistic-Operational, coordinated by MB and with the political guidance of the Ministry of Exteriors.

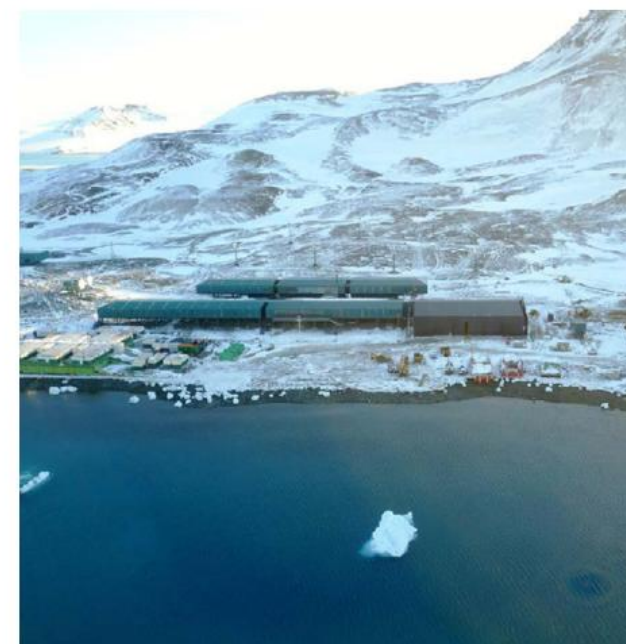
PROANTAR has been supporting research projects that aim to contribute significantly to the development and quality Brazilian scientific production, the generation

of scientific, technological and innovation knowledge related to Antarctica, as well as encouraging international cooperation within the scope of the Program.

MB coordinates all activities logistical-operational services necessary to carry out Brazilian scientific research on that continent, being responsible for the maintenance and operation of the EACF, the training and selection of personnel, the acquisition and control of special consumption and permanent items, as well as the maintenance and operation of the Ships of Oceanographic support “Ary Rongel” and Polar “Almirante Maximiano”. It also coordinates the support provided by the Brazilian Air Force for the transport of personnel, equipment and supplies necessary for the uninterrupted development of activities during the summer and Antarctic winter.

The new EACF buildings, inaugurated in January 2020, have buildings distributed over an area of approximately 4,500 m², with capacity for 64 occupants and featuring 17 state-of-the-art laboratories, in addition to a high-quality telecommunications system .

In 2019, MB started the process of Obtaining, through construction, an Antarctic Support Vessel (NAPAnt), replacing the Oceanographic Support Vessel (NAPOc) “Ary Rongel”, which will have the capacity to operate in the summer/autumn, enabling the extension of the period of permanence in the region Antarctica.



Comandante Ferraz Antarctic Station | Brazilian Navy/Disclosure

THE DEFENSE AND THE HUMAN RIGHTS

The Universal Declaration of Human Rights and the Federal Constitution are documents that guide respect for Human Rights in the various activities carried out by the Armed Forces.

The Ministry of Defense issues a directive that establishes the rules of engagement – operational procedures or general rules of action that guide the individual and collective conduct of the troops employed, including in non-conventional operations. The rules of engagement are prepared in accordance with each mission in which the Armed Forces will act, faithfully observing the legal precepts in force in the Country, which will constitute a limiting factor of freedom of action during self-defense and self-defense.

The Constitutional Employment of Forces Armadas in international conflicts is also based on international conflict law Armed (TIP)

The growing participation of the Armed Forces in and in Peace Operations Guarantee operations of Law and Order highlighted the need to improve the study of human rights and the International Law of Armed Conflict in various educational institutions of the Navy, Army and Air Force, being taught under the title of "Professional Military Ethics".

Other legal documents that guide the employment of the armed forces: Geneva law, Hague law, New York law and the Statute of Military.

It is important to emphasize that the Joint Center for Peace Operations in Brazil already has a series of internships that deal with the theme of Human Rights. In addition, the UN itself distributed guidelines for operations in peacekeeping operations.



Peacekeeping Mission in Haiti

THE TRANSFORMATION DEFENSE

Brazil, due to its importance on the world stage and due to the need to face the most diverse challenges in the field of National Defense, it needs to have Weapons compatible with your stature political-strategic.

As a result of the need to improve the preparation of the Armed Forces and endow them with appropriate capabilities to fulfill their constitutional purpose, it was verified the suitability of initiating a

transformation process, which will facilitate the implementation of innovations consistent with the operational needs and rationalization of the Forces. Within the scope of the Defense Sector, transforming means obtaining new capabilities, and not just improving existing ones, which would only be within the scope of the modernization concept.

Considering the dynamics of today's world and future, the realization that military capabilities have a life cycle and that there will be, permanently, the need for the Armed forces are endowed with new capabilities, it is verified that a transformation process has a characteristic of continuity, that is, that it will always be developing, the in order to keep the Armed Forces up-to-date and in conditions to be employed

effectively. The changes demand primarily, the development of new employment doctrines (combat, equipment and organization), with the aim of maintaining the Armed Forces able to act in an environment highly complex operation.

A transformation process, however, must be developed with great amplitude and involves the Armed Forces as a whole. Although the operational missions are carried out by the "armed arms" of each Force, the transformation must also develop in other sectors.

Thus, in addition to introducing innovation and carrying out rationalization in operational structures, there is a need for non-operational aspects to also be included in this process.

On the other hand, it should be noted that the effectiveness of a transformation process is also linked to the ability to acquire and apply state-of-the-art technology in the research and development phases of new systems of weapons and platforms.

In the case of Brazil, the transformation of defense, in addition to enabling greater training of its Armed Forces, it will create a range of opportunities for economic and social development.

PLAN OF ARTICULATION AND DEFENSE EQUIPMENT (PAED)

The PAED consolidates the Armed Forces' strategic projects that aim to meet the demands for articulation and equipment necessary to fulfill its constitutional purpose, as recommended in the National Defense Strategy (END). The PAED projects, both those of articulation in the National Territory and those of equipment of the Singular Forces, need to have, in a continuous way, specific financial resources to be made viable.

To this end, the funding and investment amounts for these projects must be part of the programmatic budget structure of the successive Pluriannual Plans of the Union (PPA).

One of the priority projects common to the Armed Forces is called Obtaining Full Operational Capability (OCOP). OCOP is understood as the achievement of high availability and

reliability of equipment, without expanding the military structure of the Singular Forces, covering the recovery of existing means, their revitalization and modernization, and even their replacement due to obsolescence. The OCOP project also includes the recovery of the strategic and operational levels of subsistence supplies, quartermasters, fuels and lubricants, ammunition and critical supplies of parts and spares.

The PAED undergoes constant revisions, in order to enable their adequacy to the national situation and to allow the projects to be reassessed based on subsidies resulting from planning based on capabilities, through which it seeks to identify the joint and singular capabilities of the Forces and raise the degree of interoperability.

DEFENSE INDUSTRIAL BASE (BID)

The BID is the set of state and private, civil and military organizations that carry out or conduct research, projects, development, industrialization, production, repair, conservation, revision, conversion, modernization or maintenance of defense products (PRODE) in the country.

A competitive and consolidated defense industry generates qualified jobs and encourages technological development, with productive linkages to other sectors of the industry.

The productive sector of defense has the following characteristics: need for a large production scale; high expenditures on research and development; long term maturation of projects; short life cycle of materials; and the existence of a market strongly influenced by government purchases and exports, with the presence of highly competitive actors.

The science, technology and innovation infrastructure dedicated to the production and availability of military technology that characterizes BID, for the Armed Forces, is much broader than the defense industry.

Its components must act in a concatenated and integrated manner with teaching activities and basic research, applied research, design, development and evaluation, manufacturing, services and logistics.

The Defense Industrial Base has already represented, for three decades, an important economic segment in the country, with a relevant contribution to the trade balance and the opening of markets for innovative and high quality products.

Trade in defense products is restricted and highly regulated. Several countries develop technological and industrial policies aimed at their defense industry, and government purchases are guided not only by technical and economic issues, but also by interests

geopolitical. This aspect restricts and restricts the transfer of various products and technologies by countries that own them to those that do not.

With regard to the domestic market, BID has managed to increasingly meet the demands of the Brazilian Armed Forces, which has kept imports of this type of

product at reduced levels.

Strengthening the BID is based on goals outlined in the National Defense Strategy.

In addition to the purpose of providing products, services and systems needed by the Armed Forces, the sector works as an inducer of technological innovations with civilian applications, given the dual nature of the technologies involved.

The integration of programs and activities between the Ministry of Defense and the Ministry of Science, Technology, Innovations and Communications has intensified in recent years, with coordinated actions to promote priority projects that represent important technological innovations and which are inducing the evolution of the BID.

The articulation of efforts and initiatives in the work of Scientific Institutions and (ICT) military and civilian, academia and business results in strengthening the entire Defense Industrial Base.

The Armed Forces offer, in terms of science, technology and innovation, valuable contributions to raising the level of autonomy

technology in the country. The Forces maintain centers of excellence, whose production, particularly with regard to applied research, has been fundamental for the scientific and technological achievements that have taken place in Brazil.

The Brazilian Defense Industrial Base comes strengthening itself with the resulting initiatives

legislation dealing with Defense Companies and Products, with emphasis on Law No. 12,598/2012, Decree No. 7,970/2013 and the Decree No. 8.122/2013.

The perspective of expanding demand for strategic defense products offers an excellent opportunity for the development and strengthening of the BID. There are, however, challenges to accompany the expansion of demand and competitively consolidate the national defense industry, such as: increasing investments in research, development and innovation; expand market share

internal and external; and strengthen the chain suppliers in Brazil.

SCIENCE, TECHNOLOGY AND INNOVATION

Sharing or restricting scientific and technological knowledge is a political decision that directly interferes in trade negotiations between countries, including negotiations on defense products.

In order to comply with the guidelines contained in the National Defense Strategy (END), the Ministry of Defense, in coordination with other ministries and representatives of the business and academic sectors, develops actions to integrate the science and technology systems existing in Brazil.

The interaction between civil and military research institutions, universities and companies is essential to integrate efforts in the creation of high technology centers in different areas.

Technological poles must be directly linked to planning processes involving government and society, with special emphasis on State incentives for technological development. The Technological Pole of São José dos Campos, in the space area, can be considered an example of synergy in the scientific-technological sector.

1. MD CENTRAL ADMINISTRATION

Military Satellite Communications System - SISCOMIS

As the main strategic communications instrument for interoperability between the Armed Forces, SISCOMIS makes a decisive contribution to coordination and interoperability in joint and interagency operations, in partnership with other government agencies.

Within the scope of SISCOMIS is the Geostationary Defense Satellite project

and Strategic Communications (SGDC), which will allow the expansion of the National Broadband Program (PNBL), in addition to the use of broadband X, exclusively military, which will serve to increase the possibilities of reliable and secure communications of the Military System of Command and Control – SISMC².

Expansion of the Capacity of the Amazon Protection System

The expansion of the technological capacity of the Amazon Protection System and the advance in data interoperability with federal, state and municipal institutions, has as a consequence the strengthening and implementation of the national integration policy for the

Brazilian Amazon.

The reactivation of the work of the Council Deliberative of the Amazon Protection System – Consipam, under the coordination of the Ministry of Defense, provides greater synergy in government actions for the region, as well as guides the joint effort to put into operation the Amazon Protection System – Sipam.

The Management and Operational Center of the Amazon Protection System - Consipam, based on the Consipam guidelines and the available and interoperable technological capacities, fulfills its mission of

promote the protection of the Amazon through synergy of government actions, articulation, planning, integration of information and generation of knowledge.

Consipam's areas of domain and action are territorial monitoring, which deals with the generation of knowledge about land use and occupation; environmental monitoring, which generates knowledge about atmospheric and hydrological conditions; and technological intelligence, which generates data, information and knowledge applied to support repression against national and transnational crimes.

The aforementioned knowledge is structured in a database and transmitted by a satellite telecommunications network that makes the information systematically available via the Internet. Some of this information and services are mentioned: weather reports and forecasts, bulletins and

hydrometeorological forecasts, image charts, deforestation alerts with orbital radar, thematic maps, aerial and orbital images,

clandestine landing fields, illegal mining, illegal fishing, among others.

Acquisition of Helicopters (Project H-XBR)

The H-XBR Project, originated in a presidential decision, is the responsibility of the Ministry of Defense and under the coordination of the Air Force Command, whose object is production, industrialization, development and supply, initially in France and later in

Armed Forces, taking advantage of the possibilities resulting from the cooperation agreement signed between Brazil and France, with the objective of implementing a production line for H225M aircraft, anchored in a technology transfer process.

Brazil, of 50 medium-sized helicopters for the

2. BRAZILIAN NAVY

The Navy directs its activities to be a modern, ready and motivated Force, with a high degree of technological independence, with naval, air and marine resources of a size compatible with Brazil's strategic political stature on the international scene.

As a result of the National Strategy for Defense, the Navy developed the Plan of Articulation and Equipment (PAEMB), aligned, at the level of the Ministry of Defense, with the Plan of Articulation and Defense Equipment (PAED).

Bearing in mind the South Atlantic being an area of geostrategic interest for Brazil, the protection of natural resources existing in the waters, seabed and subsoil under Brazilian jurisdiction must be a priority of the Naval Power. However, Brazilian interests are not limited to the

Brazilian Jurisdictions, and project towards the eastern part of the South Atlantic, surpassing the limits of our Exclusive Economic Zone and of the Continental Shelf. In the preparation of projects for articulation, procurement and modernization of means and equipment for the Navy, the following premises were considered:

The. the nuclear, cybernetic and space sectors are decisive for National Defense;

B. the task of denying the enemy the use of the sea guides the country's maritime defense strategy;

w. the reconfiguration of the Force's assets must be balanced between submarine, surface, air, naval and amphibious components;

d. prioritize the control of maritime areas in the strip that goes from Santos (SP) to Vitória (ES) and in the area of the mouth of the Amazon River;

It is. ensure the ability to project power and expand the ability to control maritime areas and deny the use of the sea, having the Marine Corps, a strategic Naval Force, of an amphibious and expeditionary character, which will expand its possibilities to act, timely and effectively, in any region that configures a strategic scenario of interest;

f. develop capacity to safeguard Brazilian people, goods and resources abroad;

g. the Force will be organized around capabilities, exploiting its intrinsic characteristics of mobility, permanence, versatility and flexibility, in order to promptly respond to any threat,

relying on sea monitoring to
from space;

H. Naval Power must be employed to bring the presence of the Brazilian State to the most remote locations, such as in the river basins of the North and Midwest regions;

i. capacity to respond to peacekeeping operations, humanitarian actions and international search and rescue commitments should be expanded;

j. O Brazil will design and manufacture its

conventional submarines with diesel-electric or nuclear propulsion, in addition to surface means, marine and naval air; It is

k. the Navy is organized and articulated in such a way as to facilitate joint and individual operations.

Projects of interest were created, to be carried out in a short and long-term time frame, with a list of some of them below.
considered priority and strategic by the Force, without obeying an order of importance:

n continue the Nuclear Program of Navy;

n revitalize and reinforce the current means of Navy;

n increase the current Submarine Force, with the incorporation of conventional means (S-BR) and nuclear propulsion (SN-BR);

n structure surface forces to expand the ability to control maritime areas with means of cover, mine countermeasures, logistical support and defense;

n renew the surface fleet, primarily by building, in Brazil, escorts, logistical support ships, patrol ships of various classes and multipurpose ships;

n recompose the Naval Air Force with means

aircraft capable of providing in-depth aerospace defense;

n resize the current contingent of

Marine Corps for a squadron marine force, amphibious brigade type;

n structure the Navy with riverine forces for the Amazon basin and the Pantanal;

n ensure the means and organizational structure necessary to meet the

subsidiary powers assigned to the Authority

Maritima, with the implementation of the Program Strategic "Security of Navigation", which provides for the creation and elevation of the category of port captaincies and their police stations and agencies and the procurement of vessels dedicated to the inspection of waterway traffic;

n increase the Force's capacity to meet international search and rescue commitments, in accordance with the

International Convention on Search and Maritime Salvage (SAR) carried out in the city of Hamburg, in 1979, and internalized by Decree No. 85, of April 11, 1991;

n provide the Navy with adequate means to participate in peacekeeping operations, in humanitarian actions and in support of the National Civil Defense and Protection System;

n implement the "Blue Amazon" Management System (SisGAAz), for the monitoring and surveillance of the Waters

Brazilian Jurisdictions (AJB), with the aim of better training the Force to control maritime traffic of interest in the South Atlantic, ensuring the safety of vessels carrying out activities of strategic value and increasing search and rescue capabilities;

n modernize military communications resources and implement the integration of all command, control, intelligence, monitoring and communications subsystems;

n increase the interoperability of the Traffic Information System Maritime (SISTRAM) with other systems international with the same purpose;

n expand the operational intelligence capacity focused on Naval Power, increasing exchanges with national and international agencies, covering knowledge and monitoring of the so-called "new threats";

n obtain, improve, disseminate and retain knowledge relating to the design, construction, operation and maintenance of naval, air and marine assets; It is

n develop the Brazilian Navy's Nuclear, Biological, Chemical and Radiological Defense System, increasing the formation of a critical mass and the acquisition of specific equipment, in line with the state of the art.

Obtaining Full Operational Capability (OCOP)

For the Navy, OCOP consists of revitalization and modernization of its operating and logistical structures, as well as means

naval, naval air and marine marines. It also includes the replenishment of conventional ammunition and operational maintenance.

Navy Nuclear Program (PNM)

The PNM reflects the development of the cycle of fuel; the construction and validation of Core Power Generation Laboratory Electrical (LABGENE); the construction of a prototype PWR6 type reactor, the basis for the reactor of the first Nuclear Propulsion Submarine Brazilian (SNBR); and the strengthening of the Center

Technological Institute of the Navy in São Paulo (CTMSP).

The PNM and the Submarine Development Program (PROSUB) are closely linked. The feasibility of PROSUB depends on the development of the propulsion system nuclear power, focus of the PNM.

Construction of the Nucleus of Naval Power

The Power Core Building Program Naval is of a strategic nature and includes subprograms and projects related to obtaining means, by acquisition or construction, with a view to increasing the operational capacity of the Navy to comply with it. your missions. One of the features of this

Program is its potential for the development of sectors related to Science, Technology and Innovation (ST&I), through the transfer of technology and the nationalization of defense systems, as well as its potential to leverage the development of national industry and related segments. In its scope, the following stand out:

a) Development Program for Submarines (PROSUB) – Consists of the construction of four new submarines

conventional diesel-electric propulsion and a conventional nuclear-powered submarine, in addition to a shipyard and submarine base for building and supporting these units.

b) Construction of four Class Corvettes Tamandaré – Obtaining, by construction, four high-performance escort ships technological, with displacement in approximately 4,000 tons, with a high level of nationalization, capable of opposing multiple threats, being able to protect the extensive Brazilian maritime area, carry out search and rescue operations, as well as allow the fulfillment of international commitments signed by Brazil.

c) Construction of Patrol Ships (PRONAPA) – Construction in the Country of Ocean Patrol Ships, with dimensions close to 100 meters and 2,000 tons of displacement, and smaller Patrol Ships with an average displacement of 500 tons, with the intention of incorporating into the MB modern ships, intended for activities related to naval inspection and supervision of the Territorial Sea,

that will operate from this type of vessel.

e) Obtaining Aircraft – Acquisition of multipurpose helicopters, aircraft for logistical support to the Brazilian Fleet and Naval District Commands, helicopters for training new Navy pilots, general purpose aircraft, as well as remotely piloted aircraft systems.

Contiguous Zone and Exclusive Economic Zone.

d) Obtaining the Airfield Vessel (PRONAE) – Acquisition of an Airship compatible with MB's logistical capacity with the highest possible nationalization index, including the purchase of helicopters and planes

f) Surface Antinavio Missile Project (MANSUP) – It aims to train Brazil in the construction of medium-range missiles, equipped with a complex technology dominated by a restricted group of countries.



Submarine Riachuelo | Brazilian Navy/Disclosure

⁶ Pressurized Water Reactor (PWR).

3. BRAZILIAN ARMY

The Army has sought to modernize its equipment and weapons, as well as the proficiency of its members. In order to meet strategic demands, the need for the Army not only to adapt and modernize, but also to adopt the concept of transformation, was verified.

The Army initiated a Process of Transformation, which will be continuous and updated based on the Army's Strategic Planning System (SIPLEx).

The current Transformation Process of the Army was expected to be developed in 03 (three) phases:

- n a preparation phase (until 2015, already completed);
- n a coexistence phase (from 2016 to 2022); It is
- n a consolidation phase (from 2023 to 2035).

Thus, from 2022, the Process of Army Transformation will come to a new doctrine – with the use of technologically advanced Defense products and highly trained and motivated professionals.

The materialization of this new doctrine will be the Land Force 2022 (FT 22), integrated into the Land Military Operational System (SISOMT) and represented by a portion of the Land Force

transformed, able to fulfill missions of any nature. The initial module of FT 22 will be the Brigada Braço Forte (BBF), a large unit made up of technologically and doctrinally advanced troops, which will serve as a model for the expansion of FT 22 to the levels determined by the Force's mission, in 2035, FT 35 .

In this context, it is highlighted that the internal planning of the Brazilian Army is organized into Articulation and Equipment, with 18 strategic projects, 11 of which are structuring and contribute to the generation of the necessary bases for the transformation of the Force. Another seven are considered inducers and generators of the capabilities needed for the Transformation Process and are found in the governance of the Army Projects Office (EPEX).

Externally, when the EB aligns its planning with the Articulation and Defense Equipment Plan

(PAED), from the Ministry of Defense, is considered the existence of only five macroprojects, specified as follows:

- a) Project Força Terrestre 2035 – currently involves six of the seven projects considered to induce and generate the necessary capabilities for the Transformation Process, which meet
- into the governance of the Army Projects Office (EPEX). They are: System

Integrated Border Monitoring System (SISFRON), Integrated Society Protection System (PROTEGER), ASTROS 2020 Missile and Rocket System, Anti-aircraft Defense, Cybernetic Defense and the Strategic Program of the Guarani Army. Project F Ter 2035 will also centralize other related projects, such as Combatente Brasileiro

2020 (COBRA 2020).

b) Strategic Program of the Army Obtaining Full Operational Capability (PrgEE OCOP) – was designed to meet the operational demands of the Army Planning System (SIPLEx), not contemplated in other programs. The aim is to maintain and/or obtain new capabilities for the Land Force, by replacing Systems and Materials for Military Use (SMEM) that are technologically outdated or at the end of their life cycle, increasing logistical interoperability between the Forces , improvement of equipment

individual and collective of the combatant and the effectiveness of the logistical support of land military assets. Also noteworthy as the main stakeholder in PrgEE OCOP is Brazilian society, whose protection constitutes its greatest benefit, as well as the Defense Industrial Base (BID), boosting Brazilian industry with the generation of specialized jobs.

c) Structuring Projects - projects that contribute to the generation of the necessary bases for the transformation of the Army, and perform in various activities such as the human dimension, education, doctrine, S&T, among others. These projects are generally the responsibility of the Operational Management Body (ODOp) and the Sectorial Management Bodies (ODS) of the Brazilian Army and are provided for in the Army's Strategic Plan.

d) Sentinela da Pátria Project – is a portfolio of structuring actions, aimed at reorganizing, adapting and improving the structure of the Land Force throughout the National Territory. It basically includes projects related to the transfer, transformation and implementation of military organizations, with the main objective of providing better conditions for the fulfillment of the constitutional missions of the Brazilian Army, in particular the defense of the Homeland.

e) Projeto Amazônia Protegida – set of structuring actions aimed specifically at strengthening the land military presence in the Amazon.

Provides for the progressive implementation of new Special Border Platoons, in addition to modernization of existing ones. It also establishes actions to strengthen the Command's operational and logistical structure.

Military of the Amazon, Military Command of the North and Military Command of the West. The project is linked to the Calha Norte Program, coordinated by the Ministry of Defense.

As a result of the previously mentioned strategy and programs, priority programs were selected with the purpose of transforming the Land Force, providing its brigades with the means of transport, equipment, weapons and supplies, of

in order to adapt operational capabilities to the demand and the level of modernization desired. They are: Obtaining Full Operational Capability (OCOP), Cybernetic Protection System – Cybernetic Defense, Integrated System of Monitoring of Land Borders (SISFRON), Integrated System for the Protection of Society (PROTEGER), New Family of Vehicles Armored on Nationally Made Wheels (Guarani), Anti-aircraft Defense System and of Missiles and Rockets ASTROS 2020.

Obtaining Full Operational Capability - OCOP

OCOP consists of the revitalization and modernization of equipment, with emphasis on the rotary-wing aviation means and the fleet of armored vehicles. It also includes the acquisition of material to replace those that are obsolete. Furthermore, it foresees an increase in the levels

of conventional ammunition and the acquisition of the new IA2 rifle, developed and produced in Brazil by Indústria de Material Bélico do Brasil (IMBEL) and which meets the Joint Operational Requirements (ROC) of the Armed Forces, approved by the Ministry of Defense (MD).

Guarani Project

The Guarani Strategic Project consists of the implementation of the New Family of Armored Rodas (NFBR) of the Brazilian Army, designed to modernize the Military Organizations of Cavalry and transform those of Motorized Infantry in Mechanized. These new armored incorporate the most recent trends and technological evolutions observed in the world. The project contributes to the acquisition of new

training, strengthening the Brazilian industry by obtaining dual employment technology, civilian and military.

From NFBR derive subfamilies of platforms reconnaissance, personnel transport, mortar, command post, communications, fire control center, ambulance, anti-tank, radar, advanced observation, among others.

ASTROS 2020 Missile and Rocket System

ASTROS 2020 is a defense system which aims to meet a specific demand in strategic terms of the Brazilian Army and the Country, consisting in providing the Land Force

with means of fire support capable of reaching targets at great distances through the development of a missile with a range up to 300 km.



Brazilian Army/Disclosure

4. BRAZILIAN AIR FORCE

The Brazilian Air Force (FAB) has launched a series of actions that will enable it to overcome the challenges of tomorrow, contributing to the development of Air and Space Power Brazilian, always focused on the mission

FAB synthesis. In this way, it will continue with adequate adaptability and agility, both in the planning and in the execution of its activities, adapting to the probable limitations of resources and the uncertainties of the

external environment. The main objectives of the transformation are, therefore, to guarantee the continuity and evolution of the FAB; ensure a continuous improvement process; and increase the

effectiveness of the resources employed. To achieve the proposed objectives, actions will be developed through programs and projects.

Obtaining Full Operational Capability - OCOP

Project management demands a process of constant performance evaluation and selection of alternatives to replace, modernize or revitalize aircraft and their systems, with a view to strengthening and maintaining the operational capacity of the Force, observing whether consecrated criteria, such as standards international efficiency.

OCOP contemplates four subprojects, which involve reinforcement in the maintenance and supply of items to keep the fleet's aircraft available, training and training activities for pilots, recomposition

of the armament stock and the technological update of the vectors. This project includes a subproject named "Future Modernization of Aircraft", which provides for the modernization of several aircraft models in the FAB fleet, in accordance with the assessments and plans prepared by the General Staff of the Air Force (EMAER). It also aims to expand integration with the Brazilian aerospace and defense industry, as well as contribute to greater competitiveness of the products offered by these sectors in the markets

internal and external.

FAB Operational Training

The Operational Training Project aims to optimize processes, systems and operational activities, as well as carry out periodic reequipment of the FAB. It is imperative that the Brazilian Air Force has an effective, credible and perceptible military capacity. Within its scope, among others, the following subprojects stand out:

n F-X2 – acquisition, in Sweden, of a first phase, of 36 multi-mission fighters to replace the

Mirage 2000, decommissioned in 2013; n KC-390 – acquisition, in Brazil, of tactical transport and in-flight refueling aircraft, increasing transport possibilities in this area of operation; It is

n Remotely Piloted Aircraft (RPA) – Initially, five units were acquired for the doctrinal consolidation of employment at FAB.



KC 390 | Air Force Agency/Sgt. Baptist

WHITE PAPER OF NATIONAL DEFENSE

ECONOMY OF DEFENSE

CHAPTER 6

The peace and institutional stability of a nation, whether in the international system or internally, require the adoption of measures in the areas of development, diplomacy and National defense. These three spheres collaborate decisive way for the achievement of the fundamental objectives of the Brazilian nation, demanding a coordinated and integrated performance of these sectors. An important government strategy lies in the field of investment to be made in each of these areas, considering the objectives to be achieved by using the National power and meeting the needs

priorities of Brazilian society. With regard to the Defense Sector, its effectiveness also requires adequate budgetary allocation and efficient management.

This chapter will present budget statements and the main peculiarities of the Brazilian budget applied to the Defense Sector. The historical data presented

are expressed in real terms, that is, considering inflation in the period, measured by the Extended National Consumer Price Index (IPCA), calculated by the Brazilian Institute of Geography and Statistics (IBGE).

Annual (LOA). It is also up to the National Congress to assess and approve these Projects and forward them for presidential sanction.

n LOA - as a last step, the Ministry of Defense like the other bodies of the Union,

detail the actions of their respective programs in the Budget Bill (PLOA), considering the country's budget constraint scenario and the limitations imposed by the New Fiscal Regime, instituted by the Amendment Constitution nº 95/216.

PRINCIPLES FOR THE DEFENSE BUDGET

The budget allocation of the Defense Sector must observe three principles:

n stability – the resources allocated to the Defense should not suffer sudden fluctuations, so that Defense projects are maintained over time;

n regularity – the disbursement of resources

it should occur on a scheduled and regular basis, allowing schedules to be met as planned; It is

n predictability – this principle confers security for medium and long-term planning, ensuring that the projects started do not suffer a break in continuity, with consequent damage to the treasury.

DEFENSE BUDGET

THE BUDGETARY PROCESS

The Defense budget process, as part of the Union budget process, is carried out in three major stages, as follows:

n Pluriannual Plan (PPA) - the Executive Branch prepares a bill that establishes a four-year PPA, in which programs, objectives, indicators and goals related to Defense are inserted. It is incumbent upon the President of the Republic to send the PPA Bill to the National Congress, which, in turn, evaluates the proposal and proposes changes, approves it and forwards it for presidential sanction. In 2019, the Plan for the period 2020-2023 was prepared,

approved by Law No. 13,971/2019, whose methodological proposal excels in results orientation and observation of realism

Supervisor. In addition to being in line with the article 165 of the Federal Constitution, the PPA must also be in line with the guidelines of the Fiscal Responsibility Law (LRF), which establishes public finance rules focused on responsibility in fiscal management.

n Budget Guidelines Law (LDO) - the President of the Republic forwards to the National Congress, each year, Bill of Budgetary Guidelines (PLDO), which guides the elaboration and execution of the Budgetary Law

CLASSIFICATION OF BUDGETARY INFORMATION IN THE WHITE PAPER

For the purpose of presenting budgetary information in the Defense White Paper, the classification of expenditures will be used

Union budgetary agencies subdivided into two large groups: financial and primary.

Financial expenses

It is the set of expenses arising from government financial operations, such as debt amortization, interest payments (passable interest) and loan granting.

From a budget point of view, financial expenses are divided into interest payments and debt amortization.

Fees

The interest expenses of the Ministry of Defense (MD) are those relating to the payment of interest, commissions and other charges for operations of internal and external credit contracted.

Debt Amortization

Expenses with the amortization of the MD's contractual debt refer to the payment and/or refinancing of the principal and the monetary or exchange rate adjustment of the contractual external public debt.

Primary Expenses

Also known as non-financial, they correspond to the set of expenses that make it possible to offer services to society, less financial expenses (external and internal debt service). Are included in these expenses, expenses with personnel, costing and investment. Primary expenses can be classified as mandatory and discretionary.

Mandatory Expenses

They are those whose execution is determined by law, with the public entity having the obligation to execute them. Examples of mandatory expenses are:

types of remuneration and personal benefits of any nature, as well as social charges and contributions paid by the entity to social security entities.

n Personnel and social charges - Personnel expenses are considered as the sum of expenses with active, inactive, reservist, retired and pensioned civil and military servants, including any

n benefits linked to the personnel payroll - these are personnel payroll items, granted to military and civil servants, such as:
medical and dental care for

civil servants, employees, military personnel and their dependents; pre-school care for dependents of civil servants and employees; transportation allowance for public servants, food allowance, civil servants' birth funeral assistance rate; food for military personnel on a ranch, movement and military uniforms.

n Space Control System Aéreo Brasileiro (SISCEAB) - set of activities and facilities - such as aid

Discretionary Expenses

They are those carried out based on the availability of budgetary resources, the amount of which the manager has some degree of decision as to their allocation and execution. Are divided into:

n costing - expenses for the maintenance of public services, as well as for conservation works and adaptation of real estate, and current transfers, which are budget appropriations applied to expenses of other public or private entities, not corresponding in direct counterpart in goods or services .

to air navigation, surveillance radars, control centers and control towers airfield, telecommunications stations, human resources, among others, which aims to provide regularity, safety and efficiency of traffic flow at airports and in the airspace.

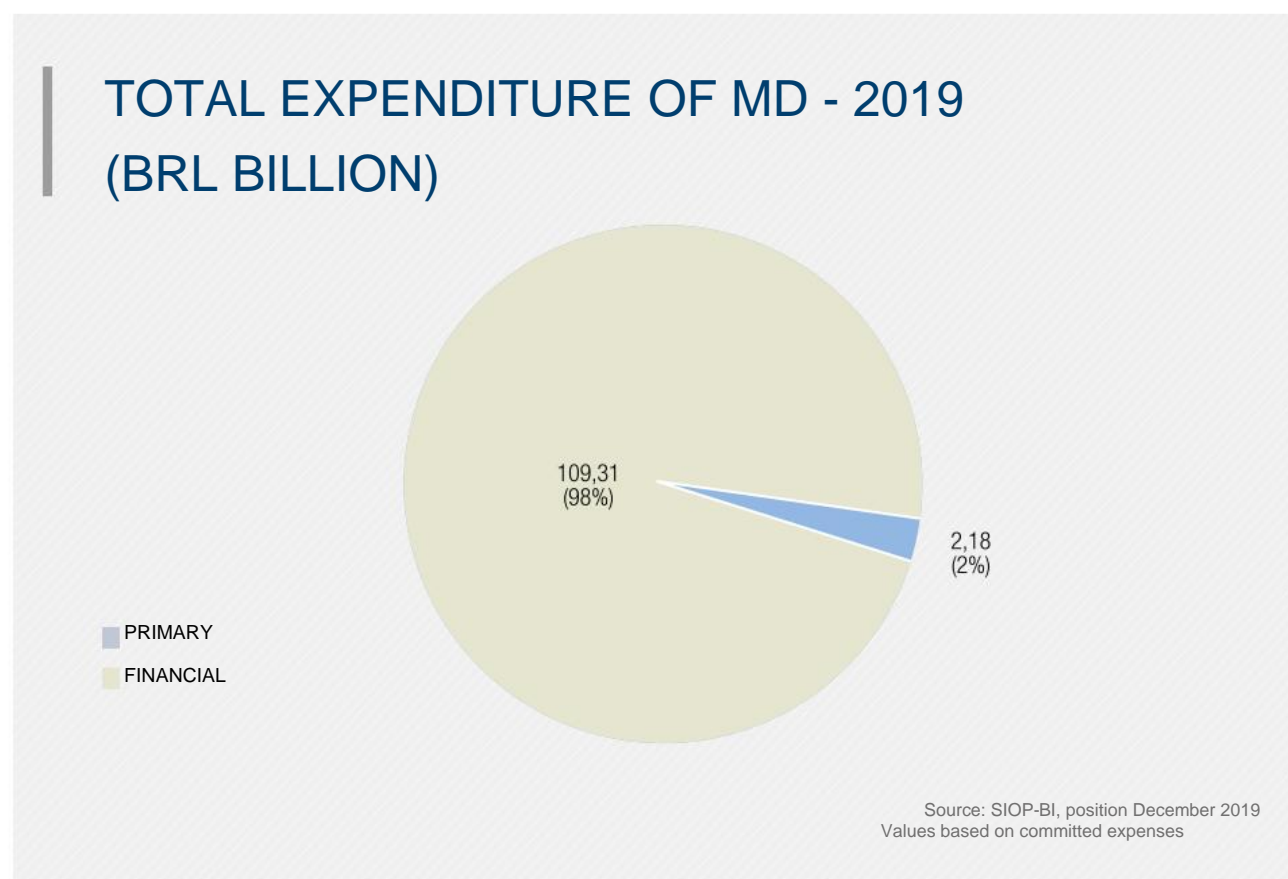
n Judgments - expenses resulting from the payment of precatories; court judgments, final and unappealable; court decisions on writs of mandamus and others.

n investment – expenses earmarked the acquisition of real estate, installations, equipment, permanent material and softwares.

n financial inversion – expenses for the acquisition of real estate or capital goods already in use; acquisition of securities representing the capital of companies or entities of any kind, already constituted, when the operation does not involve a capital increase; and with the constitution or increase of the capital of companies, in addition to other expenses classifiable in this group.

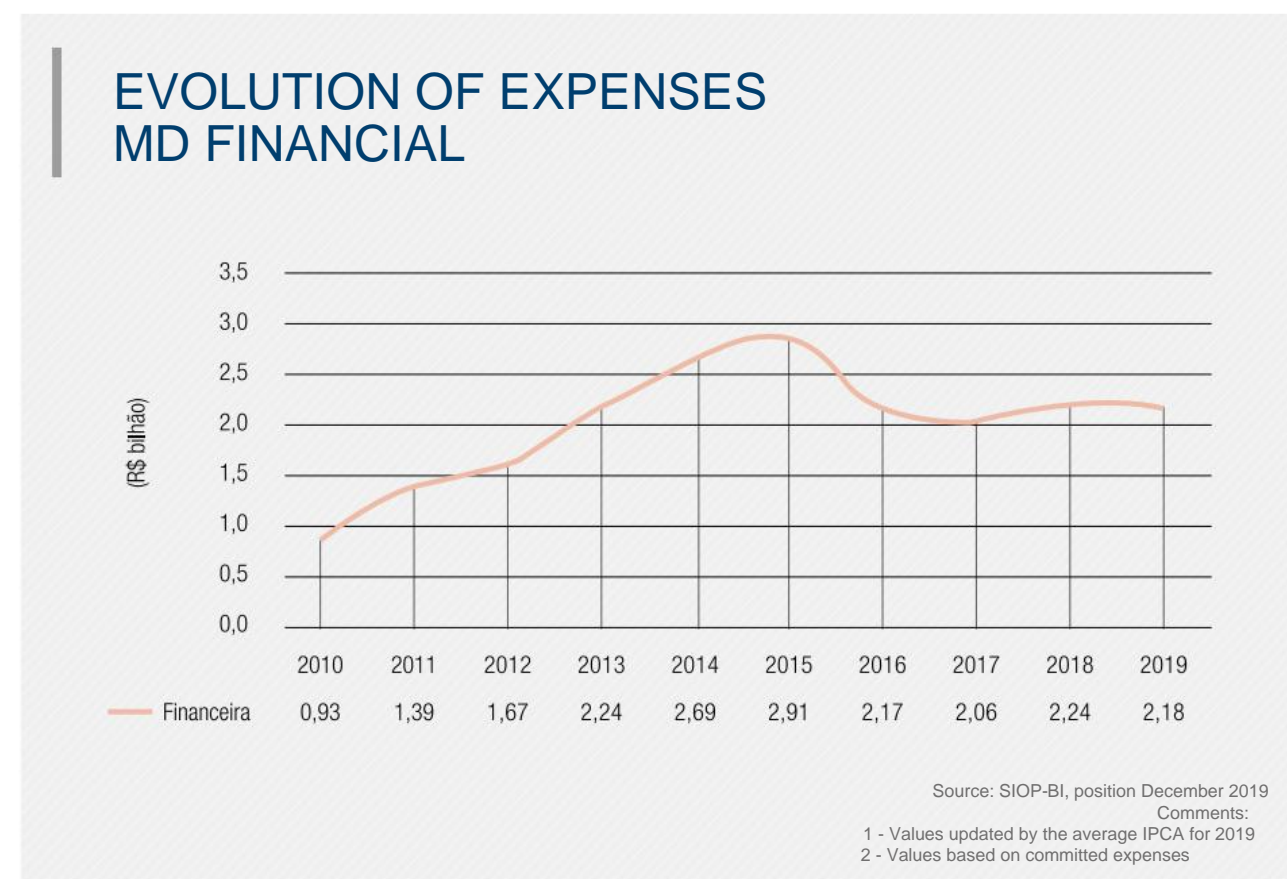
EXECUTION OF THE DEFENSE BUDGET

As can be seen in the following graph, in 2019, the total financial expenses of the Ministry of Defense (MD) were BRL 2.18 billion and the primaries were BRL 109.31 billion, totaling around R\$ 111.49 billion, not including parliamentary amendments and extraordinary credits.



THE IMPLEMENTATION OF FINANCIAL EXPENSES

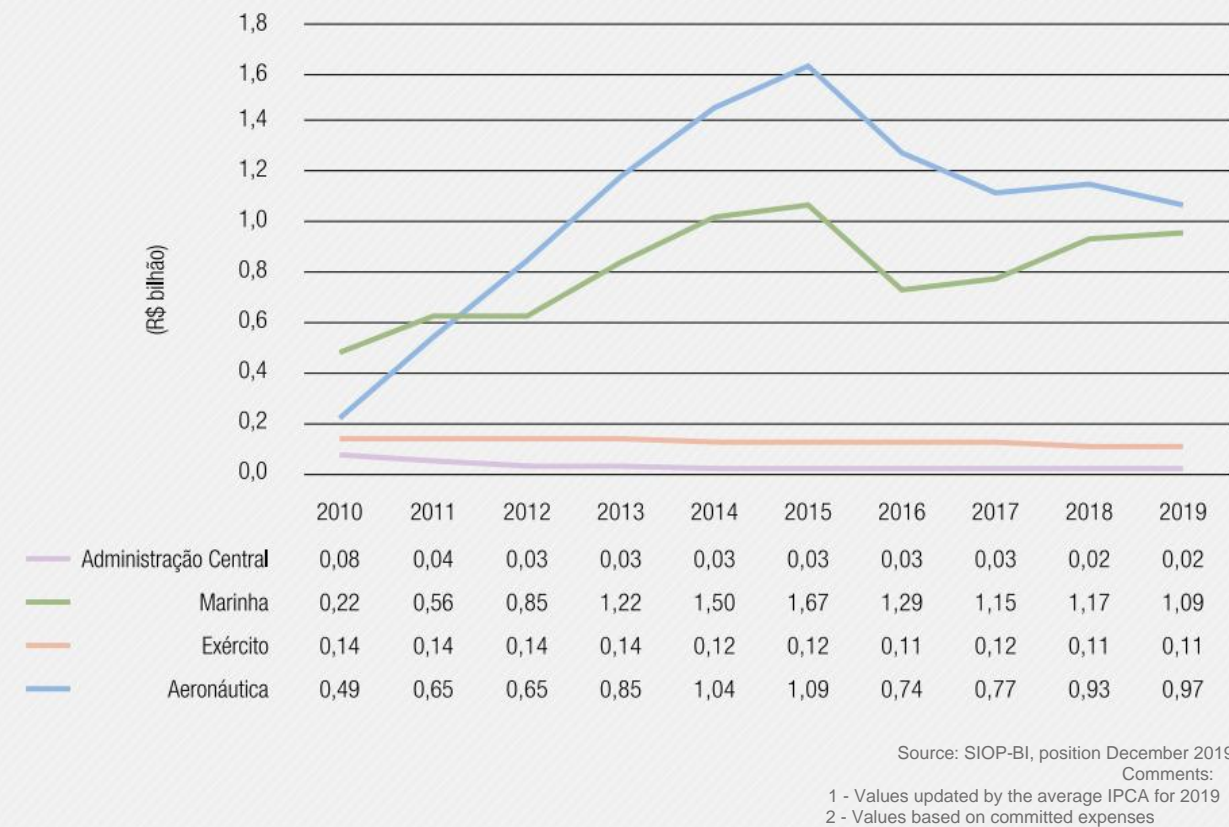
With regard to financial expenses, represented in the graph below, the largest volume refers to debt service related to the financing of strategic projects of the Defense Sector, including amortization, interest and other charges. The other portion refers to the Union's contribution to the cost of MD civil servants.



Debt service expenses refer to the contracts of the Commands of the Navy, in the case of the Submarine Development (PROSUB);

the Air Force, within the framework of the Project for the Acquisition of Fighter Jets (FX-2); and the Central Administration, referring to the HX BR Helicopter Acquisition Project.

EVOLUTION OF FINANCIAL EXPENSES - INSTITUTIONAL VISION



The graph above shows the evolution of financial expenses of the Central Administration and Military Commands from 2010 to 2019.

It should be noted that the highest percentage of financial expenses, both in the Central Administration of the MD and in the Military Commands, refers to the service expenses.

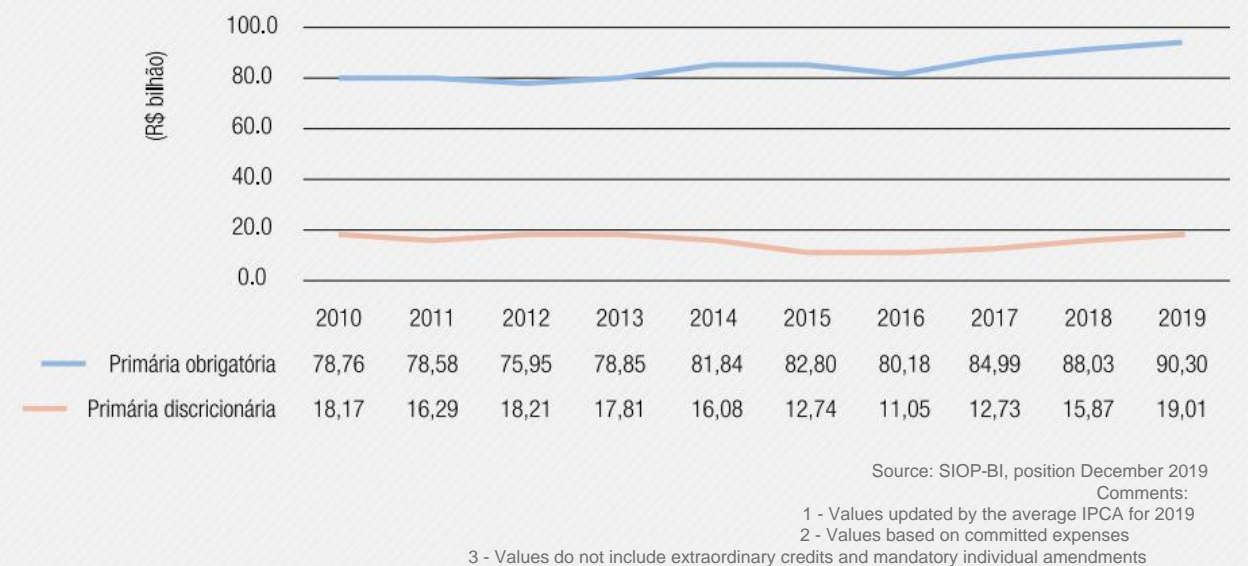
debt, related to project financing contracts. However, the payment of the contribution of the Union, its autarchies and foundations to fund the social security system of federal civil servants working in the MD and Armed Forces are also included in the scope of these

IMPLEMENTATION OF PRIMARY EXPENDITURE

Below, we present the evolution of mandatory and discretionary primary expenditures

of the MD, including the Armed Forces, in the period from 2010 to 2019.

EVOLUTION OF EXPENSES MD PRIMARY



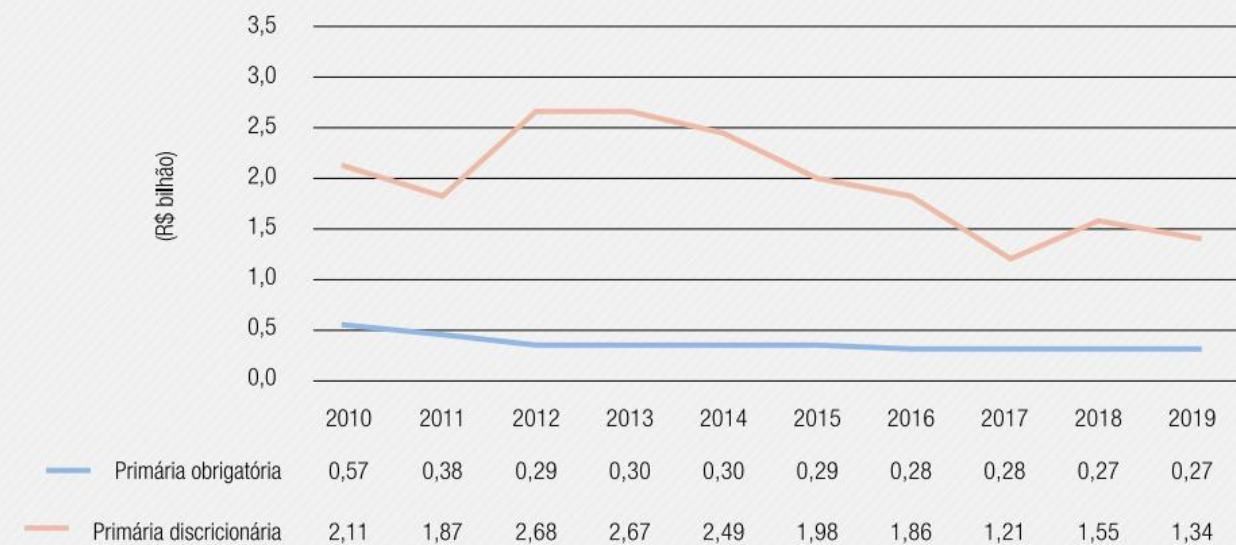
In general, the Military Commands have higher values in mandatory expenses, including in this group those related to the payment of personnel, which can be justified by the number of military personnel in those institutions.

As shown in the previous graph, mandatory primary expenditures showed gradual growth in the period from 2013 to 2019, as a result of staggered readjustments

promoted in military pay, even impacting other expenses linked to the payment of personnel.

Discretionary primary expenditures had a lower value in 2016, when they totaled R\$11.05 billion, due to the worsening of the fiscal crisis in Brazil in that period, which then began to present a gradual recovery.

IMPLEMENTATION OF PRIMARY EXPENDITURE IN THE CENTRAL ADMINISTRATION



Source: SIOP-BI, position December 2019

Comments:
1 - Values updated by the average IPCA for 2019
2 - Values based on committed expenses

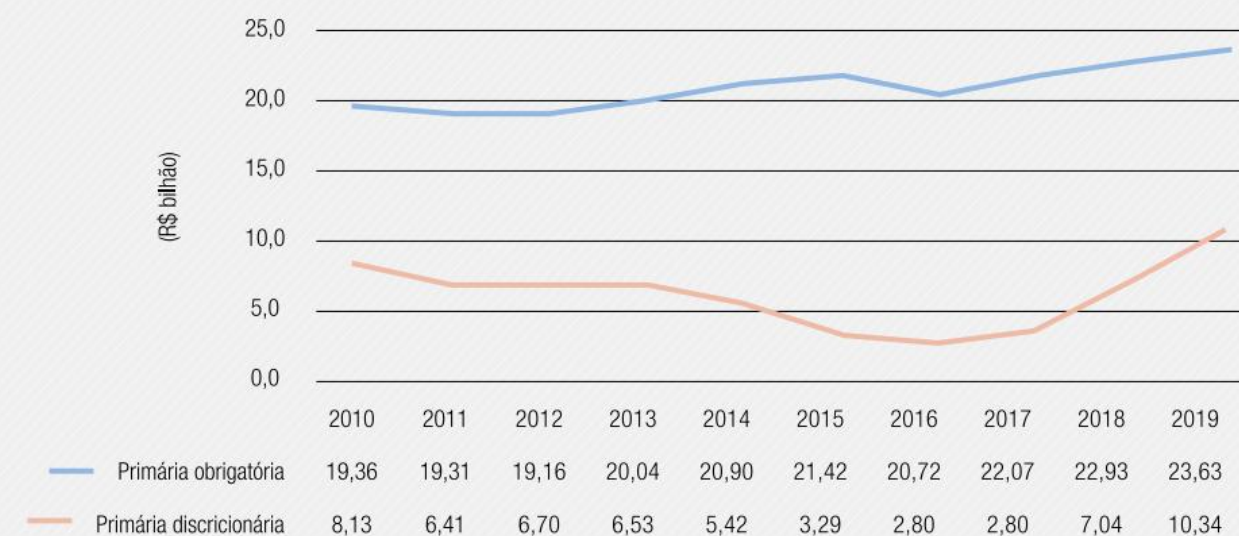
3 - Values do not include extraordinary credits and mandatory individual amendments

It is observed that in the MD's Central Administration, discretionary expenses predominate. This is because this list includes the expenses of the HX BR Project, destined to the acquisition of multipurpose helicopters for the Armed Forces.

In the list of obligatory expenses of the central administration of the MD are those of personnel and social benefits.

IMPLEMENTATION OF PRIMARY EXPENDITURE IN THE NAVY COMMAND

EVOLUTION OF PRIMARY EXPENDITURE NAVY COMMAND



Source: SIOP-BI, position December 2019

Comments:
1 - Values updated by the average IPCA for 2019
2 - Values based on committed expenses

3 - Values do not include extraordinary credits and mandatory individual amendments

Mandatory expenses tended to grow throughout the series, due to wage adjustments in the period, while discretionary expenses had a considerable reduction in 2015 and 2016, a period that coincided with the country's fiscal crisis.

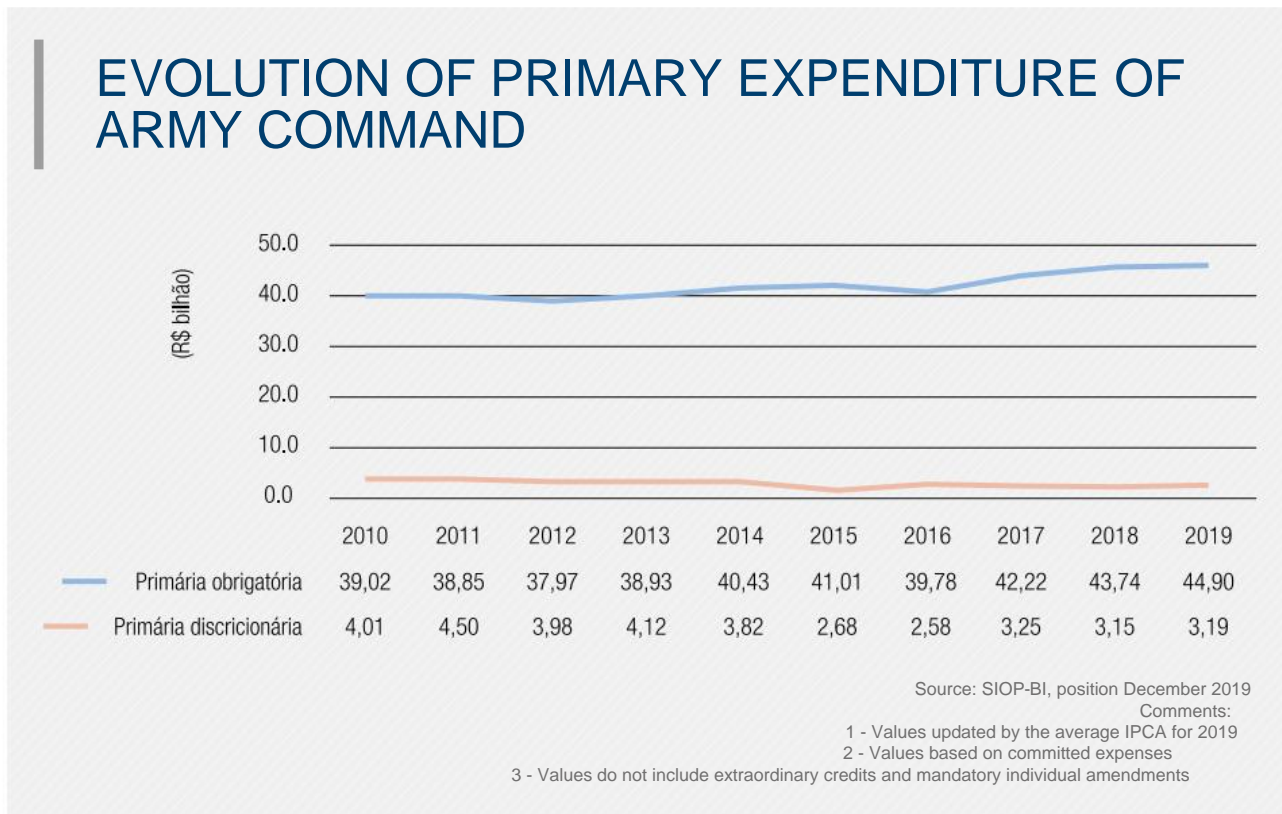
With regard to the Navy Command, as in other Military Commands, mandatory expenses are the most expressive.

Among the discretionary expenses of the Command of the Navy are those related to

strategic projects of that Force, preparation of troops and maintenance of military organizations, as well as the capitalization of the Empresa Gerencial de Projetos Navais (EMGEPRON).

Discretionary expenses amounted to BRL 8.13 billion in 2010, however, they had a consecutive reduction from 2012 to 2016, when they reached BRL 2.8 billion, at the height of the fiscal crisis. In 2017, these expenses started a recovery cycle.

IMPLEMENTATION OF PRIMARY EXPENDITURE IN THE ARMY COMMAND

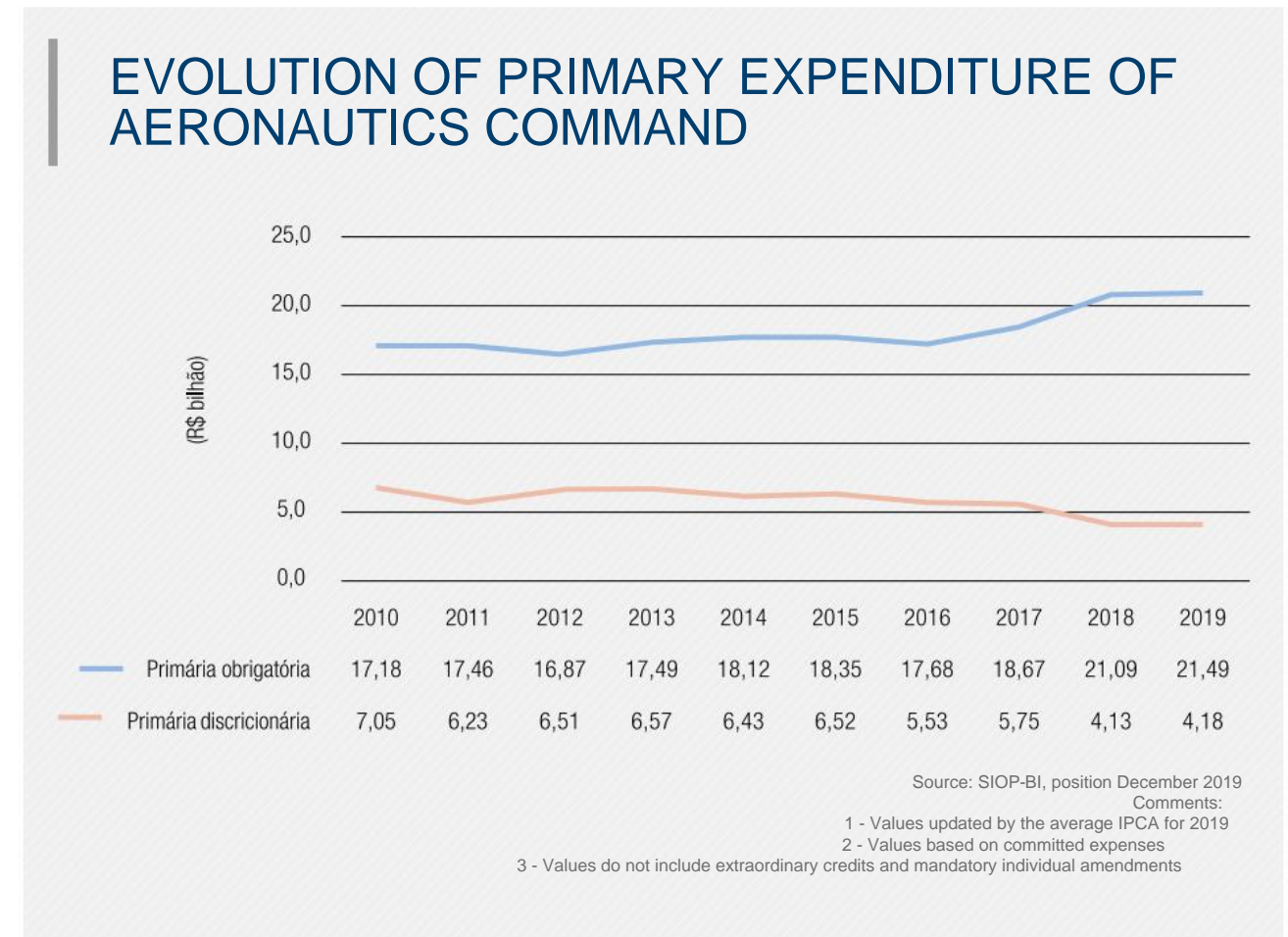


As for the Army Command, it is noted that there is a slight variation between the years 2010 to 2017, being it is more accentuated in the last two years.

Mandatory expenses have values

higher than those of the other Forces, due to higher volumes of personnel expenses, in virtue of its effectiveness.

IMPLEMENTATION OF PRIMARY EXPENDITURE IN THE AERONAUTICS COMMAND

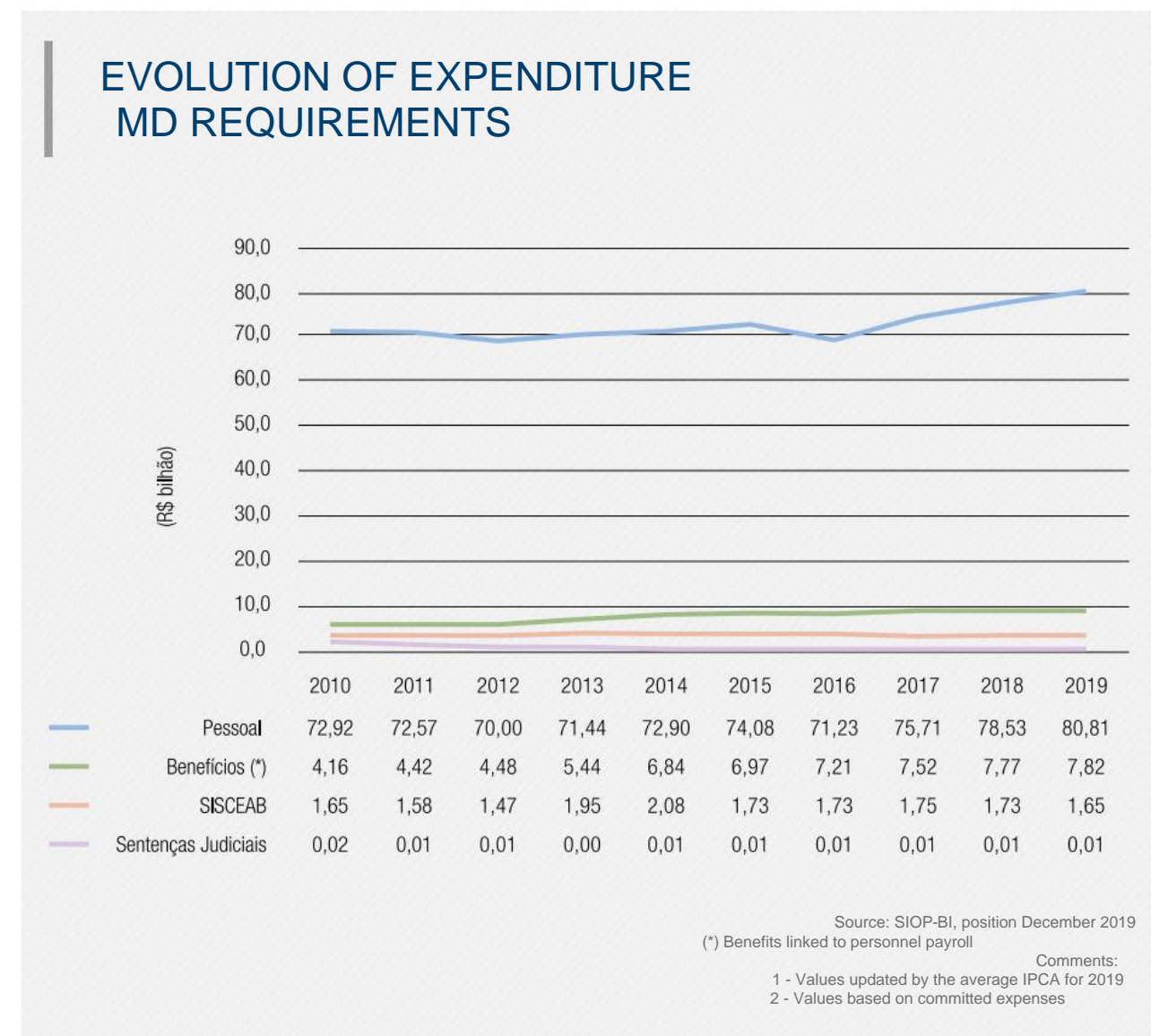
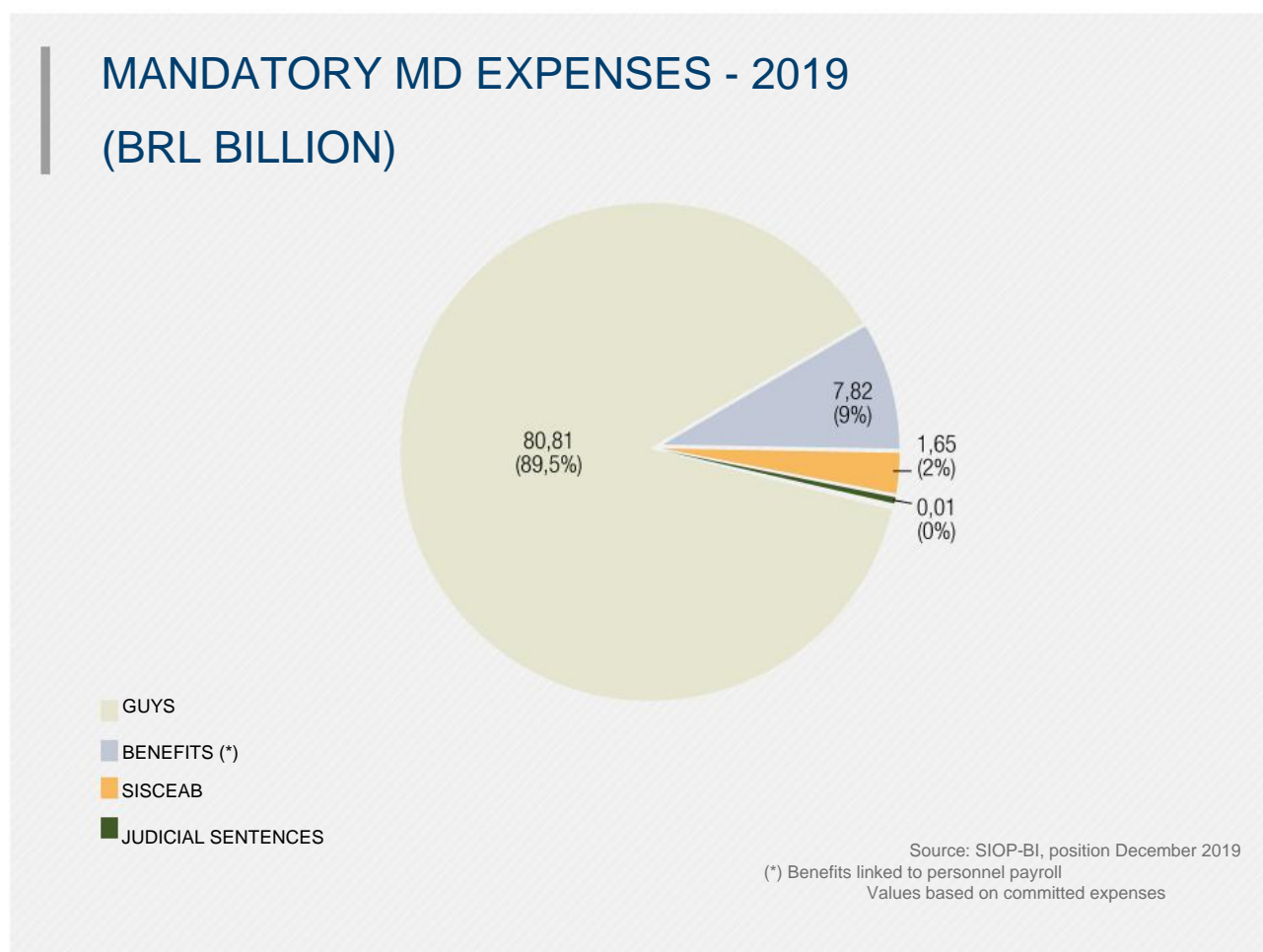


Within the scope of the Air Force Command, the value of discretionary expenses remained with little variation until 2015, when a trend of reduction of values is observed

earmarked for strategic projects, depending on the most restrictive fiscal scenario.

MANDATORY EXPENSES

In 2019, personnel expenses reached 9%, R\$ 7.82 billion. Also included in the list of mandatory primary expenditures, which amounted to R\$90.30 billion, expenses are expenses inherent to the Brazilian Airspace Control System (SISCEAB) and court decisions while expenditures on benefits linked to the payroll decisions.

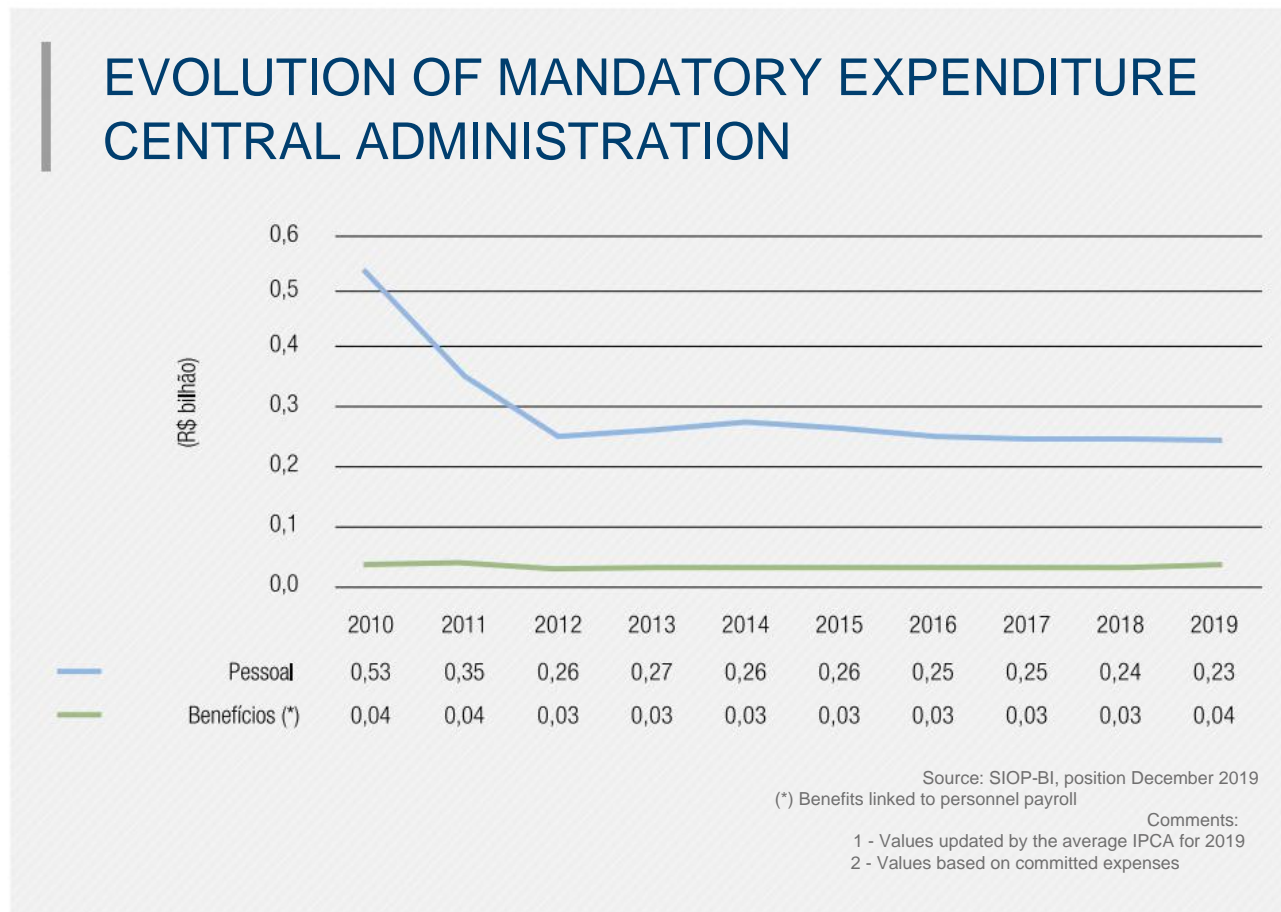


The previous graph shows the evolution of a growth trend in personnel group expenses and mandatory expenses, in the period from 2010 to 2019, on benefits linked to the payroll.

Personnel expenses are the most representative of the series presented, and in all years they correspond to more than 85% of total expenses. SISCEAB expenses had little variation in the period and those of judicial sentences remained practically constant.

As of the 2017 financial year, it is observed

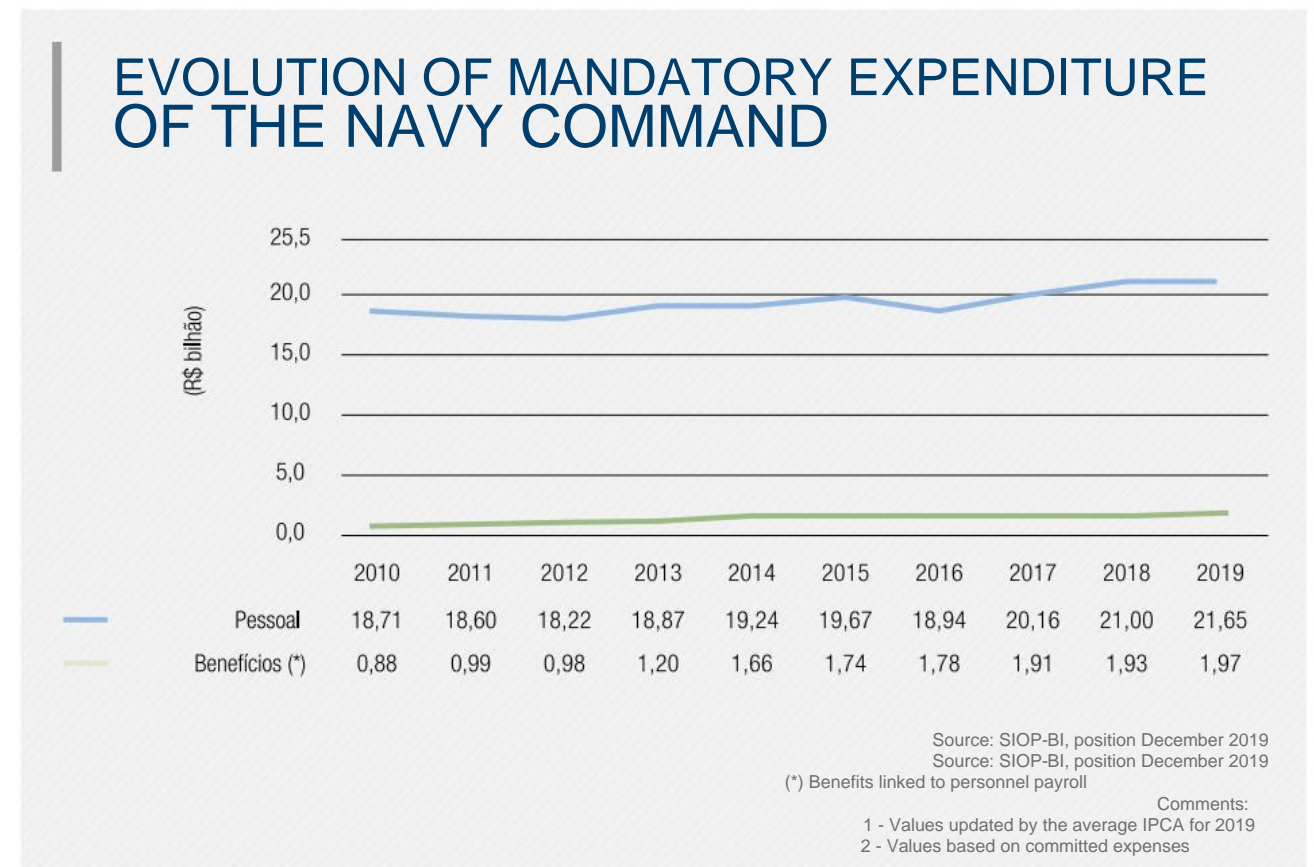
EVOLUTION OF MANDATORY CENTRAL ADMINISTRATION EXPENDITURE



Administration personnel expenses Central do MD decreased from 2010, due to the change in the structure of the federal public administration, which resulted in the transfer of the National Aviation Agency

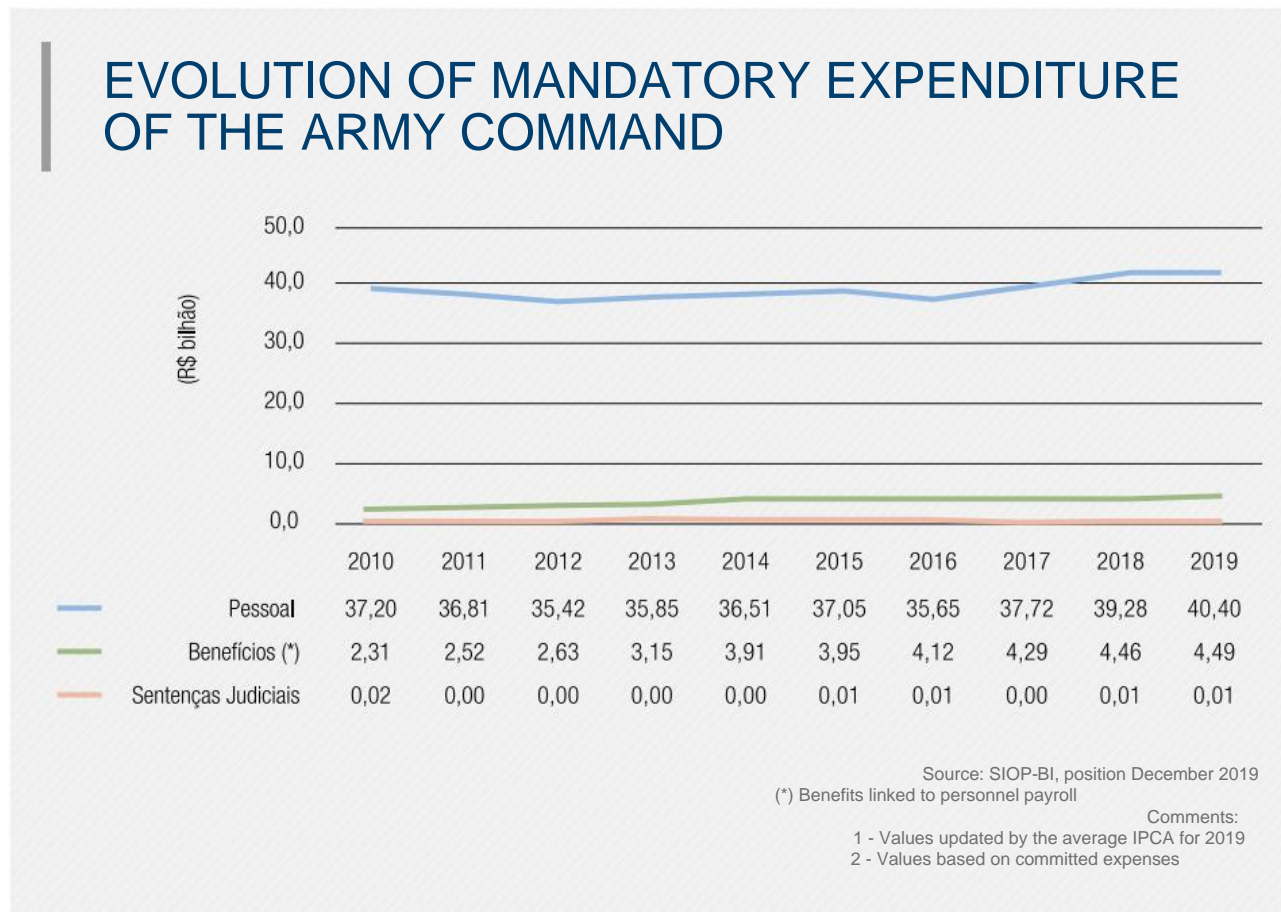
Civil, from the Ministry of Defense to the Presidency of the Republic (PR). Regarding the benefits linked to the payroll, these remained practically constant.

EVOLUTION OF MANDATORY EXPENDITURE OF THE NAVY COMMAND



In the Command of the Navy, the expenses of personal predominate.

EVOLUTION OF MANDATORY EXPENDITURE OF THE ARMY COMMAND

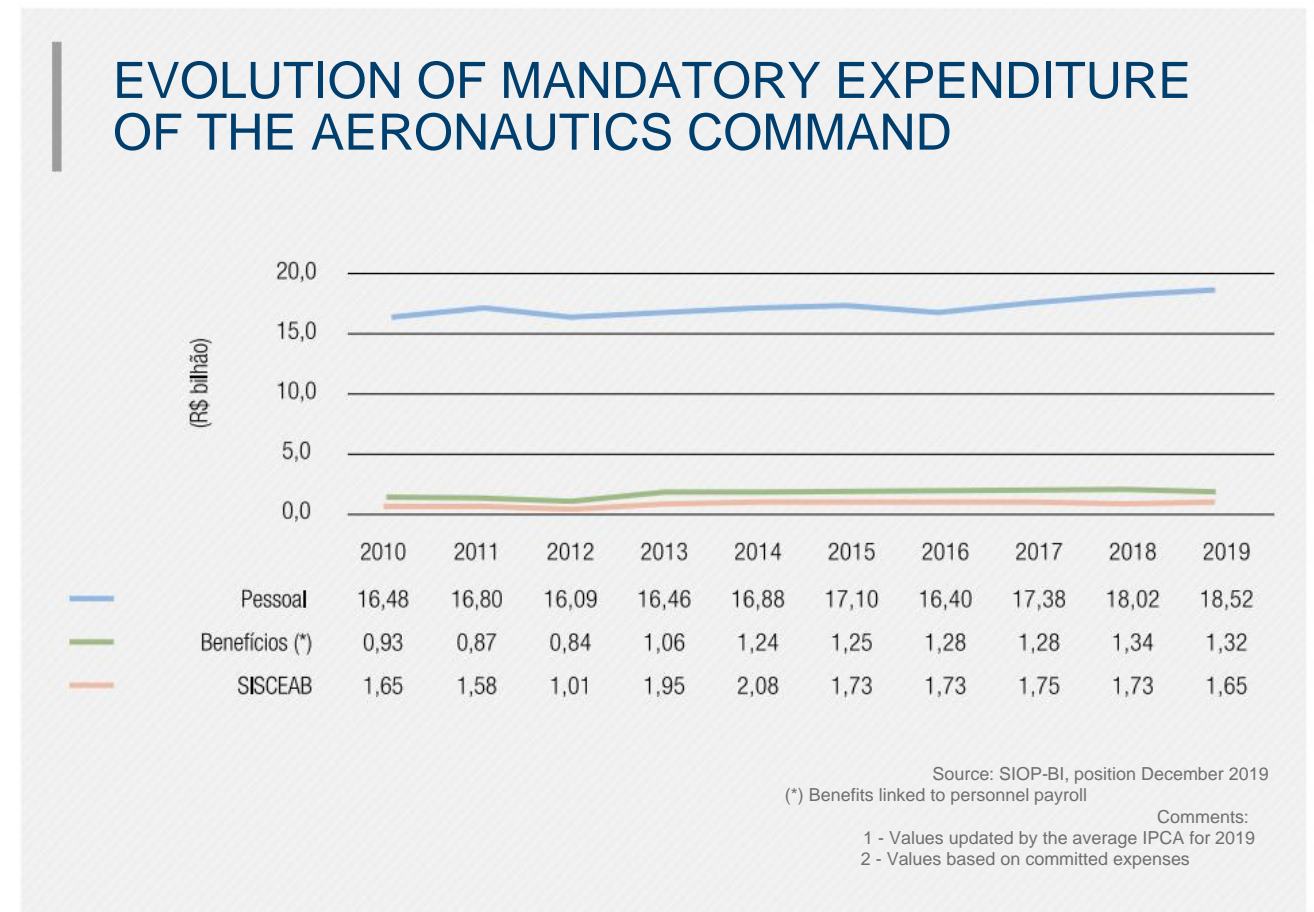


In the Army Command, personnel expenses are significantly higher than in other Commands, in view of its greater staff.

Expenses related to benefits

personnel payroll, showed gradual growth over the period, while those of judicial sentences had little representation in the series.

EVOLUTION OF MANDATORY EXPENDITURE OF THE AIRLINE COMMAND

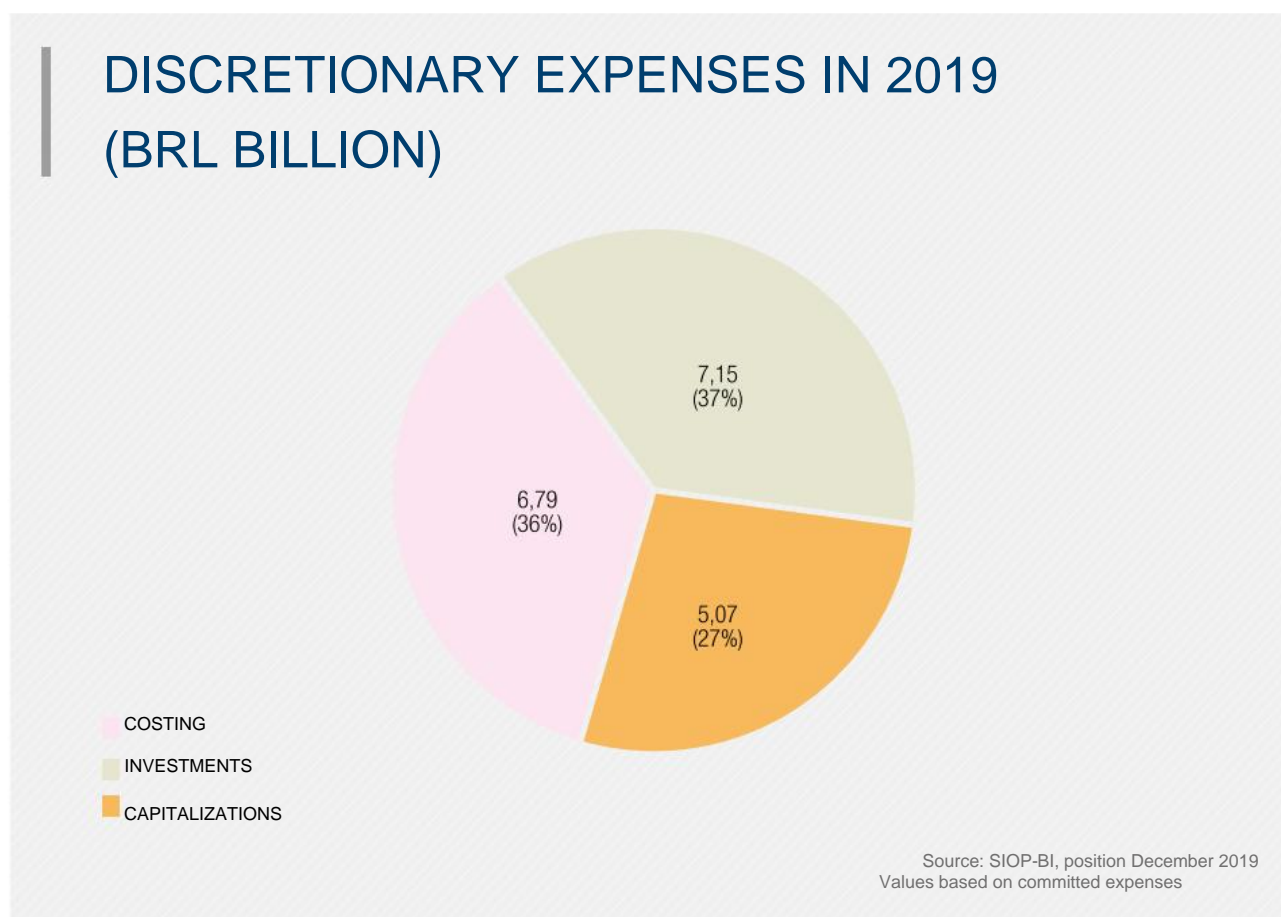


Within the scope of the Air Force Command, in which Personnel expenses also predominate, expenses with benefits linked to the personnel payroll had a slight variation.

In this Command, there was also the execution of mandatory expenses related to SISCEAB contracts, which showed little variation in the period.

DISCRETIONARY EXPENSES

Discretionary primary expenditures for 2019, shown in the graph presented below, is composed of the groups of investments, costing and capitalizations.



In 2019, investments were, in their majority, related to expenses related to MD's strategic projects, contained in the Growth Acceleration Program (PAC), established by Decree No. 6,025/2017, with the purpose of instituting measures to stimulate the

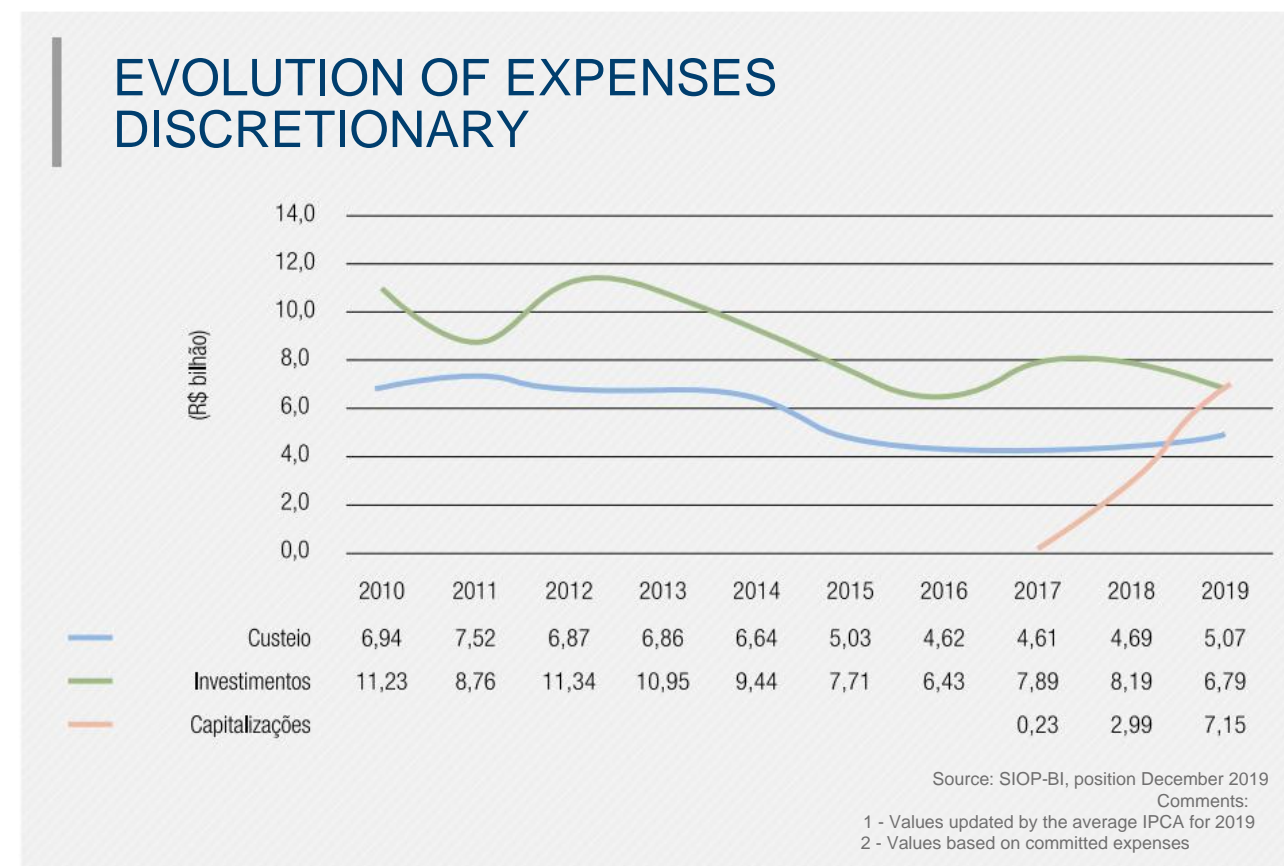
private investment and expand public investments in infrastructure.

Costing expenses were largely related to the administrative maintenance of military organizations and military training and instruction.

The capitalizations were contributions of resources made by the MD, in EMGEPRON, with the purpose of qualifying the company to develop

projects of interest to National Defense.

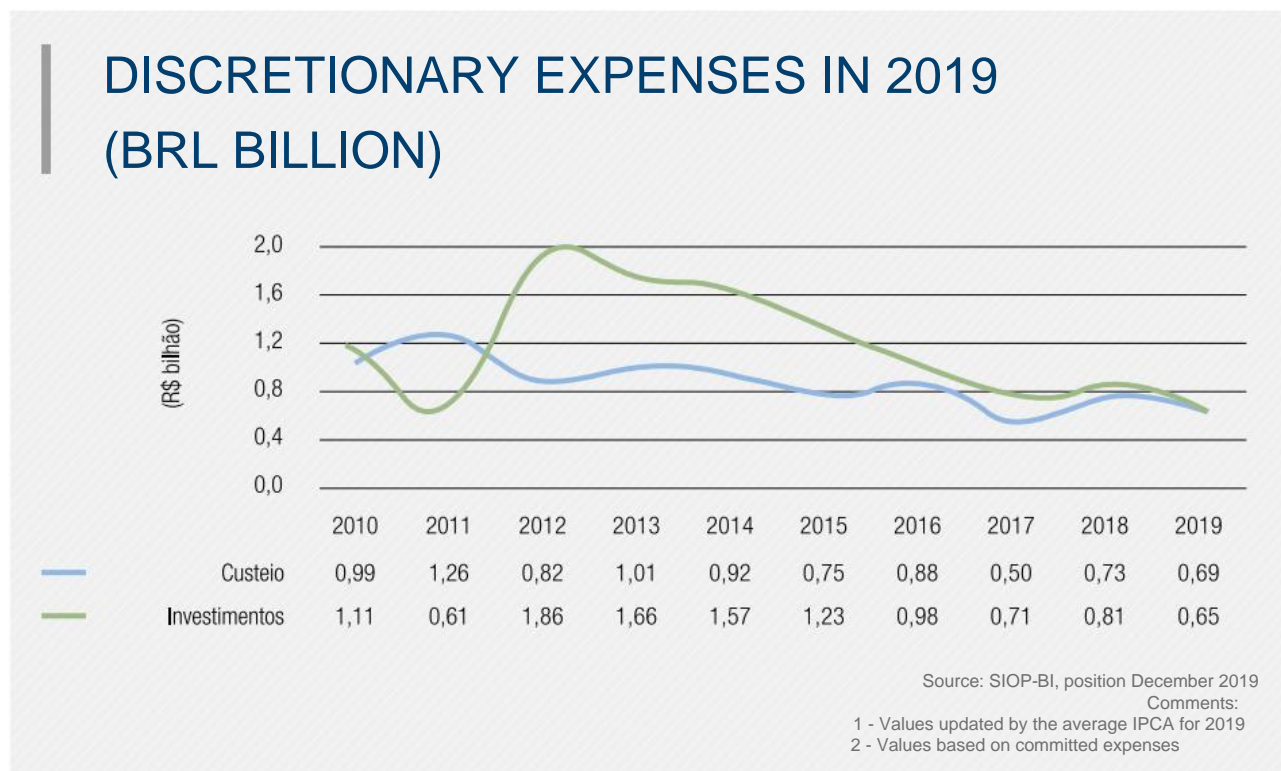
The following graph shows the behavior



Investment and current expenses showed lower values in the years 2015 to 2019, due to the deepening of the fiscal crisis in the country, which culminated in the enactment of Constitutional Amendment nº 95/2016, which constrained the growth of public spending.

The capitalizations refer to contributions of resources in EMGEPRON for the construction of Tamandaré Class Ships and the obtaining of an Antarctic Support Vessel, within the scope of the Brazilian Antarctic Program.

EVOLUTION OF DISCRETIONARY EXPENDITURE OF THE CENTRAL ADMINISTRATION



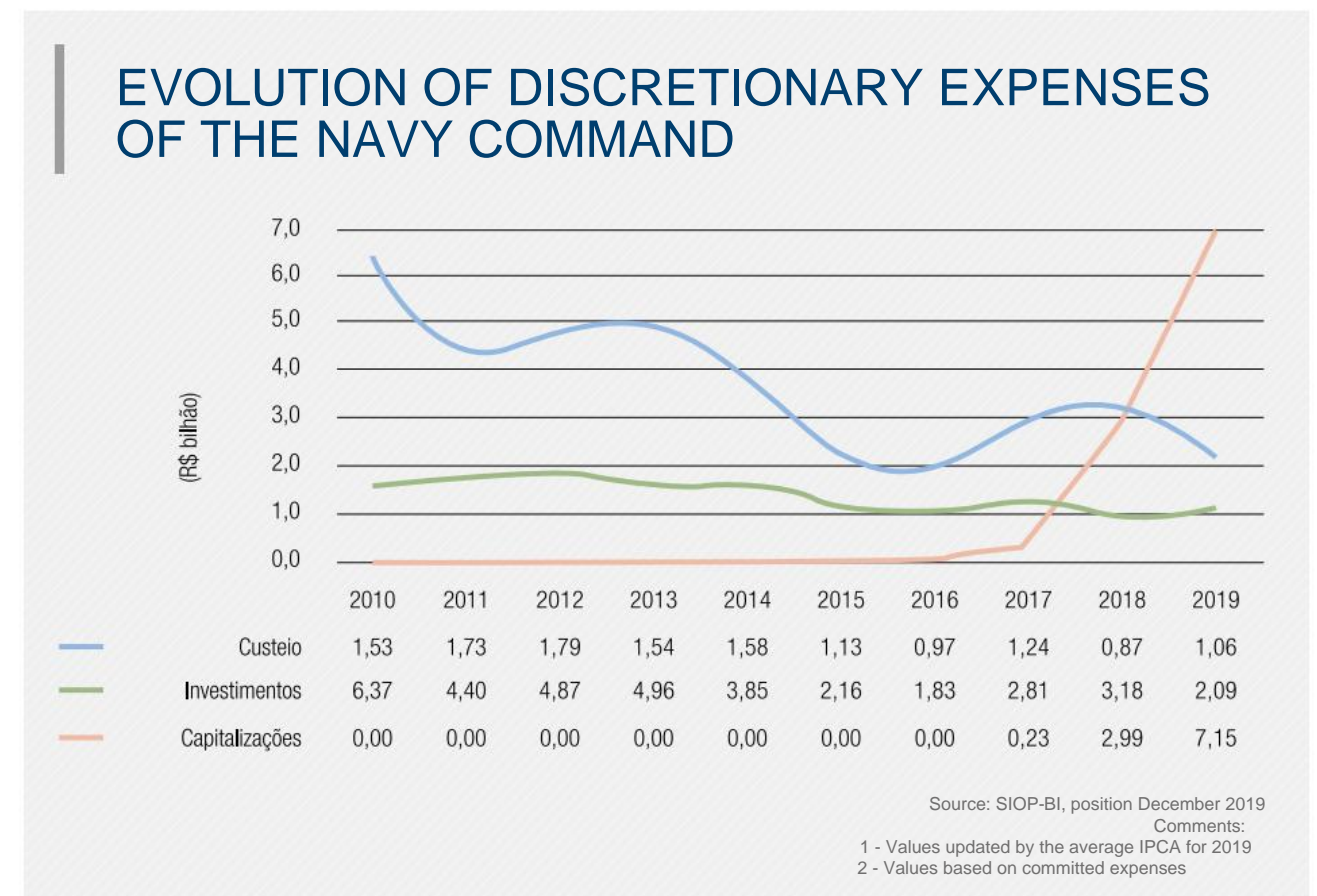
Within the scope of the Central Administration of the MD, the most representative expenses of the investment group were those inherent to the HX BR strategic Project, which foresees the production, development and acquisition of 50 medium-sized helicopters, for general use, for use by the Armed Forces and of the Presidency of the Republic. This Project will enable Brazil to conceive, develop and produce aircraft of

rotary wings and provide the Forces with modern aircraft for general use.

As shown in the graph above, from 2010 to 2019, investments tended to decrease, starting in 2013, with the highest value in 2012, when it reached R\$ 1.86 billion.

Current expenses fluctuated throughout years, with the highest peak in 2011.

EVOLUTION OF DISCRETIONARY EXPENDITURE OF THE NAVY COMMAND



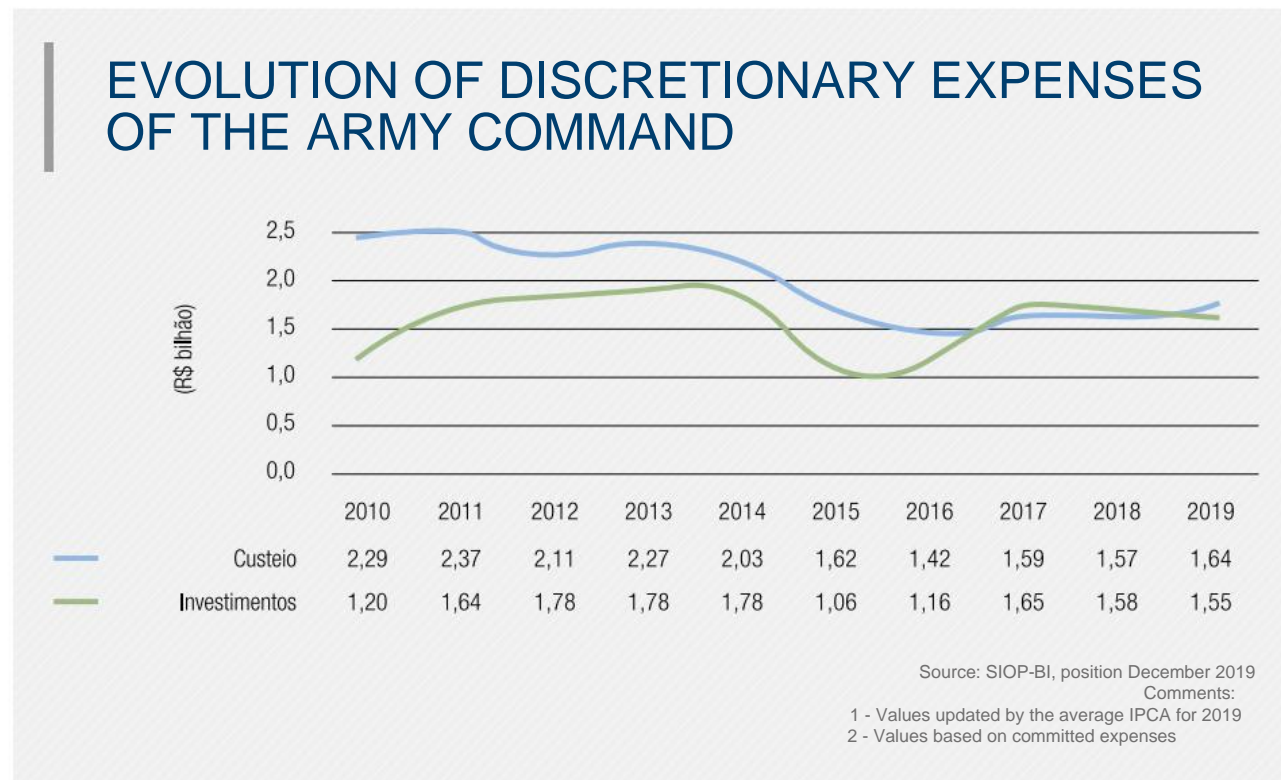
Currently, MB has three important projects aimed at the defense of Brazilian jurisdictional waters: PROSUB, Navy Nuclear Program (PNM) and Tamandaré Class Program.

The capitalizations carried out for the EMGEPRON from 2017 to 2019 were intended

to the construction projects for four Tamandaré Class ships (R\$ 9.5 billion) and the acquisition of an Antarctic vessel (R\$ 0.8 billion).

As shown in the graph above, from 2010 to 2019, investments tended to decrease and current expenses fluctuated over the years.

EVOLUTION OF DISCRETIONARY EXPENDITURE OF THE ARMY COMMAND

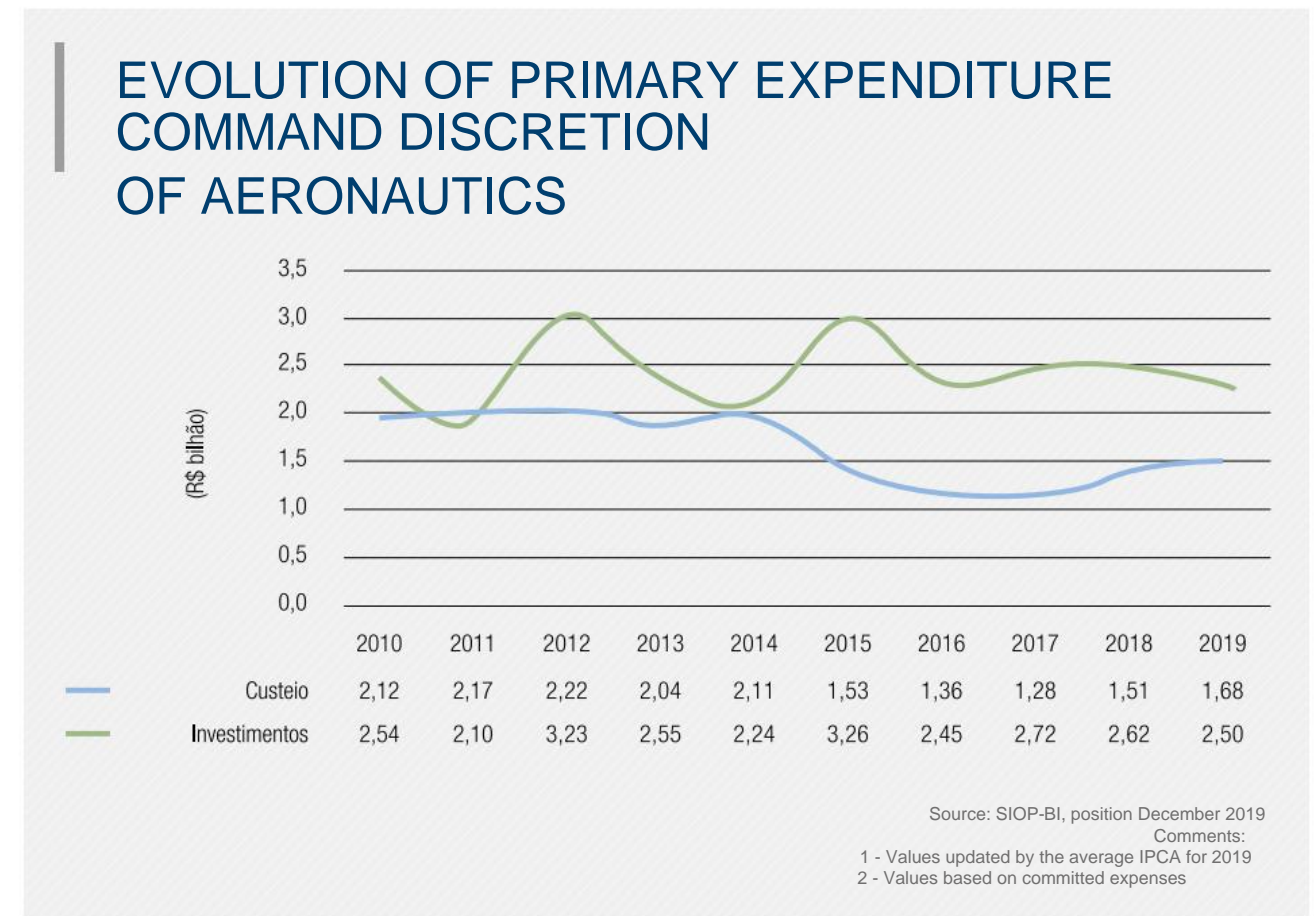


Within the scope of the Army Command, funding expenses were higher than investments in almost the entire period, with the exception of the years 2017 and 2018.

Investment expenses include

those related to the Force's strategic projects, such as the Guarani Programs, Astros 2020 and SISFRON, which are of great importance for the defense of the extensive Brazilian territory.

EVOLUTION OF DISCRETIONARY EXPENSES OF THE AIRLINE COMMAND



With regard to the Air Force Command, the value of the investments was higher than the costing expenses, from 2012 onwards, with the beginning of the strategic projects of that Forces in the PAC.

Among the main strategic projects in that Force's portfolio are the Fighter Acquisition Project (FX-2) and the Development and Acquisition of a Military Tactical Freighter (KC-X and KC-390).

STATEMENT OF INVESTMENTS IN DEFENSE

INTERNATIONAL SCOPE

Comparing data from the Defense budgets of different countries is useful to obtain an overview of orders of magnitude and how financial resources are applied.

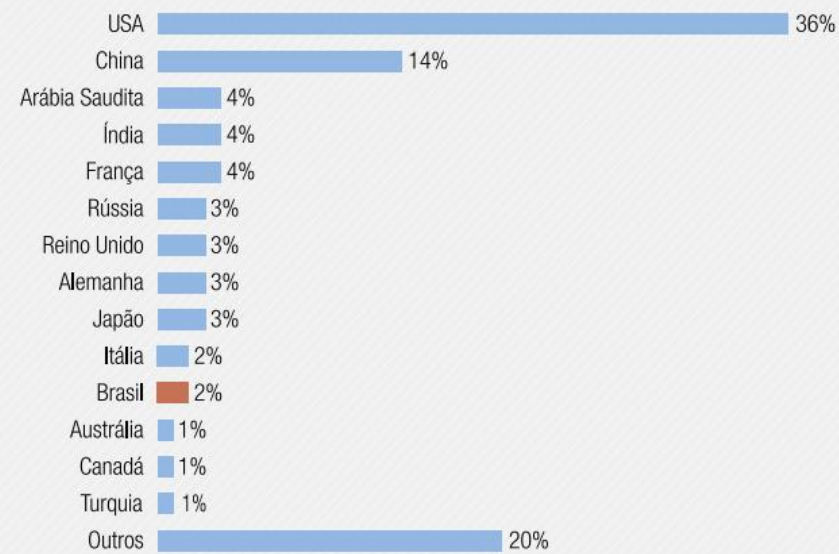
In the comparisons presented, information on investments in Defense was based on data released by the World Bank and is intended to show the position that Brazil occupies in comparison with other countries in the world and Latin America.

In 2018, the total investment in Defense was

of 1.8 trillion dollars, considering countries all over the world. In this comparison, Brazil occupied twelfth place, out of a total of 17 countries with the highest volume of investments in this sector.

The investments of the United States of America represent more than a third of the total invested in Defense around the world. The China also stands out in this sector, occupying the second position in the ranking. The amount invested by Brazil represents only 2% of the total.

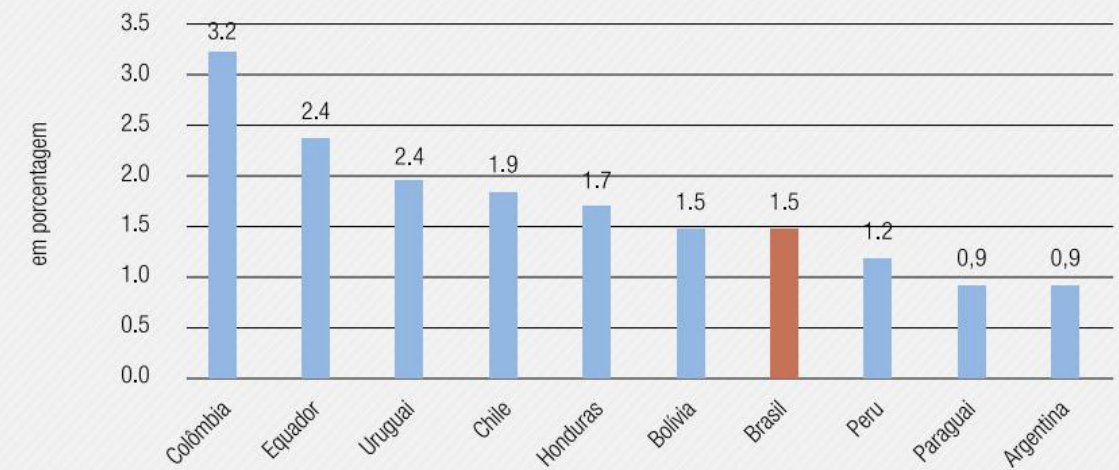
PROPORTION OF EXPENSES WITH DEFENSE IN THE WORLD - 2018



Source: The World Bank, October 2018 The figures reported include personnel costs.

Analyzing the list of countries in America Latin America with the highest percentage of GDP invested in the Defense Sector, in 2018, Brazil ranked seventh. Colombia, Ecuador and Uruguay occupy the top three positions, respectively.

COMPARISON OF EXPENDITURE DEFENSE IN RELATION TO THE GDP OF LATIN AMERICAN COUNTRIES - 2018 (%)



Source: The World Bank, October 2018 Notes:
 1 - The reported amounts include personnel expenses.
 2 - Cuba and Venezuela are not included in the series because they did not report the percentage for 2018.
 3 - The other Latin American countries invested percentages equal to or less than 0.6% of GDP in Defense.

WHITE PAPER OF NATIONAL DEFENSE

ANNEXES

GUYS

MILITARY NUMBERS IN 2019				
CLASSIFICATION	NAVY	ARMY	AERONAUTICS	TOTAL
officers	11,444	28,530	11,375	51,349
squares	62,426	181,673	52,904	297,003
Cables	14,551	26,512	4,467	45,530
sailors/ Soldiers	17,207	108,832	22,481	148,520
TOTAL	73,870	210,203	64,279	348,352

Notes: Quantities do not consider special squares.
Quantities for enlisted personnel include all enlisted personnel, with cables and soldiers highlighted.

MILITARY NUMBERS IN 2019 BY LOCATION		
LOCATION	EXISTING	% OF TOTAL
navy		
1st Naval District (1st DN)	50,951	68.97
2nd Naval District (2nd DN)	2,761	3.74
3rd Naval District (3rd DN)	3,697	5.00
4th Naval District (4th DN)	3,471	4.70
5th Naval District (5th DN)	2,494	3.38
6th Naval District (6th DN)	1,963	2.66
7th Naval District (7th DN)	3,525	4.77
8th Naval District (8th DN)	2,058	2.79
9th Naval District (9th DN)	2,950	3.99
Total	73,870	100%

MILITARY NUMBERS IN 2019 BY LOCATION		
LOCATION	EXISTING	% OF TOTAL
Army		
Military Command of the Amazon (CMA)	20,259	9.64
Northern Military Command (CMN)	9,440	4.49
Eastern Military Command (CML)	48,117	22.90
Northeast Military Command (CMNE)	24,486	11.65
Western Military Command (CMO)	14,760	7.02
Plateau Military Command (CMP)	25,653	12.20
Southern Military Command (CMS)	49,740	23.66
Southeast Military Command (CMSE)	17,748	8.44
Total	210,203	100.00

MILITARY NUMBERS IN 2019 BY LOCATION		
LOCATION	EXISTING	% OF TOTAL
Air Force		
Midwest	10,579	16.46
North	8,182	12.73
North East	8,249	12.83
South	6,245	9.72
Southeast	31,024	48.26
Total	64,279	100.00

QUANTITATIVES OF MILITARY STAFF IN 2019 IN PEACE MISSIONS			
COUNTRY	MISSION	FUNCTION	QUANTITATIVE
CYPRUS	UNFICYP	STAFF OFFICER	1
		OBSERVER MILITARY	1
DARFUR	UNAMID	STAFF OFFICER	1
REPUBLIC DEMOCRATIC OF CONGO	MONUSCUS	FORCE COMMANDER	1
		OBSERVER MILITARY	1
		FORCE STAFF COMMANDER	7
WESTERN SAHARA	MINURSE	OBSERVER MILITARY	9
SOUTHERN SUDAN	UNMISS	OBSERVER MILITARY	3
		STAFF OFFICER	8
SUDAN	UNISFA	OBSERVER MILITARY	1
LEBANON	UNIFIL	SECONDMENT	1
		STAFF OFFICER	3
		STAFF OFFICER BDA. SPANISH	7
	FTM-UNIFIL	FTM COMMANDER	1
		STAFF OFFICER	12
		LIBERAL FRIGATE	200
CENTRAL REPUBLIC AFRICAN	MINUSCA	STAFF OFFICER	6
		OBSERVER MILITARY	4
GUINEA BISSAU	UNIOGIBS	STAFF OFFICER	1
YEMEN	UNMHA	OBSERVER MILITARY	1
TOTAL MILITARY STAFF IN UN MISSIONS			270

Source: Head of Joint Operations (CHOC/EMCFA-MD) - CONSOLIDATED INFORMATION UNTIL SEP 03, 2019.

QUANTITATIVES OF MILITARY ATTACHES ABROAD IN 2019	
MILITARY	EXISTING
Attaches	77
Deputy Attachés	9
Auxiliary Attachés	76
Subtotal	162
Representatives in International Organizations and their assistants	88
Total	250

QUANTITATIVES OF CIVIL SERVANTS IN THE MINISTRY OF DEFENSE IN 2019								
	NAVY	ARMY	AERONAUTICS	GENSERV	ESG	HFA	GENERAL ADMINISTRATION	TOTAL
General Plan of Positions of the Executive Power	1955	3,165	1,453	-	14	204	70	6,861
Technology Career Military	1,559	659	282	-	-	-	-	2,500
Science Careers and Technology	243	209	1,341	45	-	-	-	1,838
Career Plan HFA	-	-	-	-	-	1,212	-	1,212
Teaching Career Basic, Technical and Technological – EBTT	102	702	281	-	-	-	-	1,085
Teaching Career Higher	125	86	259	-	15	-	-	485
Air Defense and Traffic Control Group Air	-	-	321	-	-	-	-	321
Public employment	-	-	35	-	-	169	-	206
Maritime Court (Judge)	7	-	-	-	-	-	-	7
Total	3,993	4,821	3,972	45	29	1,585	70	14,515

Source: DW-Personal, SIAPE database, Aug-2019.

DEFENSE BUDGET

BUDGET ALLOCATIONS (CONSTANT VALUES - R\$ BILLION)		
YEAR	REGULATORY	
	DRAFT BUDGETARY LAW	ANNUAL BUDGET LAW
2010	92.85	94.17
2011	90.14	91.90
2012	90.46	92.00
2013	88.73	90.67
2014	91.65	93.07
2015	90.88	94.08
2016	87.60	87.03
2017	97.51	99.08
2018	101.06	102.87
2019	107.03	107.72

Source: SIOP-BI, position December 2019
Values updated by the average IPCA for 2019

EXPENDITURE COMMITTED BY MILITARY COMMAND (CONSTANT VALUES - R\$ BILLION)					
YEAR	UNIT				TOTAL
	ADM. MD CENTRAL	NAVY	AIRLINE	ARMY	
2010	2.63	26.42	41.16	23.57	93.77
2011	2.19	25.05	41.47	23.21	91.92
2012	2.85	25.47	40.12	22.92	91.36
2013	2.85	26.5	41.18	23.75	94.29
2014	2.19	26.53	42.3	24.4	95.92
2015	2.19	25.15	41.76	24.76	93.86
2016	2.06	23.66	40.49	22.83	89.05
2017	1.47	26.71	44.28	24.47	96.93
2018	1.82	30.69	46.31	25.76	104.57
2019	1.64	35.01	48.19	26.65	111.49

Source: SIOP-BI, position December 2019
Values updated by the average IPCA for 2019

EXPENSE COMMITTED BY GROUP OF NATURE OF EXPENDITURE (CONSTANT VALUES - R\$ BILLION)					
YEAR	UNIT				TOTAL
	GUYS	COSTING	INVESTMENTS	DEBT	
2010	70.00	11.11	12.25	0.41	93.77
2011	69.63	11.94	9.46	0.89	91.92
2012	67.12	11.46	11.58	1.21	91.36
2013	68.54	12.50	11.54	1.71	94.29
2014	69.90	13.73	10.11	2.17	95.92
2015	71.00	12.07	8.38	2.41	93.86
2016	68.26	11.89	7.18	1.72	89.05
2017	73.90	12.44	8.94	1.65	96.93
2018	77.69	13.04	11.97	1.89	104.57
2019	81.10	13.71	14.80	1.88	111.49

Source: SIOP-BI, position December 2019
Values updated by the average IPCA for 2019

EXPENDITURE COMMITTED BY MILITARY COMMAND (CONSTANT VALUES - R\$ BILLION)					
YEAR	UNIT				TOTAL
	ADM. CENTRAL	NAVY	AIRLINE	ARMY	
2010	0.58	17.96	35.60	15.85	70.00
2011	0.38	17.85	35.23	16.16	69.63
2012	0.27	11.49	33.90	15.46	67.12
2013	0.28	18.12	34.31	15.82	68.54
2014	0.29	18.46	34.94	16.23	69.90
2015	0.27	18.86	35.44	16.42	71.00
2016	0.26	18.15	34.10	15.74	68.26
2017	0.27	19.69	36.96	17.00	73.90
2018	0.26	20.78	38.80	17.85	77.69
2019	0.26	21.73	40.50	18.61	81.10

Source: SIOP-BI, position December 2019
Values updated by the average IPCA for 2019

COMMITTED EXPENSE - COSTING BY MILITARY COMMAND (CONSTANT VALUES - R\$ BILLION)					
YEAR	UNIT				TOTAL
	ADM. CENTRAL	NAVY	AIRLINE	ARMY	
2010	0.98	2.25	4.35	3.52	11.11
2011	1.23	2.54	4.60	3.57	11.94
2012	0.81	2.59	4.47	3.59	11.46
2013	0.99	2.57	4.96	3.98	12.50
2014	0.90	3.05	5.52	4.25	13.73
2015	0.74	2.66	5.17	3.50	12.07
2016	0.87	2.60	5.15	3.27	11.89
2017	0.52	3.01	5.57	3.33	12.44
2018	0.76	2.72	5.81	3.76	13.04
2019	0.73	2.99	6.01	3.97	13.71

Source: SIOP-BI, position December 2019
Values updated by the average IPCA for 2019

COMMITTED EXPENDITURE - DOMESTIC AND EXTERNAL DEBT (CONSTANT VALUES - R\$ BILLION)			
YEAR	UNIT		
	NAVY	AERONAUTICS	GRAND TOTAL
2010	0.08	0.33	0.41
2011	0.41	0.48	0.89
2012	0.70	0.51	1.21
2013	1.03	0.68	1.71
2014	1.32	0.86	2.17
2015	1.49	0.92	2.41
2016	1.13	0.60	1.72
2017	1.02	0.64	1.65
2018	1.07	0.82	1.89
2019	1.00	0.88	1.88

Source: SIOP-BI, position December 2019
Values updated by the average IPCA for 2019

EXPENDITURE COMMITTED TO INVESTMENTS BY MILITARY COMMAND (CONSTANT VALUES - R\$ BILLION)					
YEAR	UNIT				TOTAL
	ADM. CENTRAL	NAVY	AIRLINE	ARMY	
2010	1.06	6.12	1.20	3.86	12.25
2011	0.58	4.25	1.64	3.00	9.46
2012	1.77	4.70	1.76	3.36	11.58
2013	1.58	4.78	1.90	3.27	11.54
2014	1.50	3.71	1.84	3.06	10.11
2015	1.17	2.14	1.15	3.92	8.38
2016	0.93	1.77	1.24	3.23	7.18
2017	0.69	2.99	1.76	3.50	8.94
2018	0.80	6.13	1.70	3.34	11.97
2019	0.65	9.28	1.67	3.19	14.80

Source: SIOP-BI, position December 2019
Values updated by the average IPCA for 2019

GLOSSARY

A

Agency – organization, institution or instrument-based entity

legal and/or normative that has specific competences, which may be governmental or not, military or civil, public or private, national or international.

Agency Brazilian-Argentina in Accounting and Control of Materials

Nucleares (ABACC) – is an independent international organization, created by the governments of Brazil and Argentina, responsible for verifying the peaceful use of nuclear material that can be used, directly or indirectly, in the manufacture of

nuclear weapons.

Brazilian Jurisdictional Waters - comprise the inland waters and maritime spaces in which Brazil exercises jurisdiction, to some degree, over activities, installations, vessels and living and non-living natural resources, found in the liquid people, mass, on the bed or in the marine subsoil, to the purposes of control and inspection, within the limits of international and national legislation. These maritime spaces comprise the range of 200 nautical miles counted from the baselines, plus the overlying waters

the extension of the Continental Shelf beyond the 200 nautical miles where it occurs.

Amazônia Azul® – name given to the region comprising the surface of the sea, waters overlying the seabed, soil

and marine subsoil contained in the extension

Atlantic that projects from the coast to the outer limit of the continental shelf

Brazilian. It must be interpreted from four perspectives: economic, scientific, environmental and of sovereignty.

B

Defense Industrial Base (BID) – bodies and entities of the direct and indirect public administration and legal entities governed by private law that carry out or conduct research, projects, development, industrialization, production, repair, conservation, revision, conversion, modernization, maintenance or decommissioning of Defense Products - PRODE

or Defense Systems in national territory.

W

Capacity for Coordination and Control – capacity that aims to allow, under any circumstances, coordination between different government agencies, and is based on the domain and integrity of information traffic.

Dissuasion Capacity – conditions that the Nation has to apply the National Power, mainly its Protection and Prompt Response capacities, in case of eventual hostile actions against the sovereignty and the legitimate interests of Brazil. It is configured as an essential factor for National Defense, insofar as it has the

purpose of discouraging possible aggressions.

Information Management Capacity – capacity that aims to guarantee the acquisition, production and dissemination of knowledge necessary for the coordination and control of the means available to the Nation, providing decision makers and those responsible for National Defense, at all levels, with the access to knowledge

necessary for the decision-making process.

Strategic Mobility Capacity – is the condition that the country's transport logistics infrastructure has, multimodal capacity and means of transport, which allow the Armed Forces to move quickly to the area of employment, in the national territory or in the outside, when

impose the defense of national interests.

Mobilization Capacity – is the capacity that aims to increase the effectiveness of the use of the Armed Forces.

Prompt Response Capacity – is the ability to employ National Power in response to manifest threats. It aims to prevent the aggravation of a crisis situation or end a dispute, in order to avoid the engagement of the country in a prolonged conflict.

Protective Capacity – expresses the most relevant national objective, that of guaranteeing sovereignty, national heritage and territorial integrity. Therefore, it is important to provide the Nation with

the ability to respond in exceptional situations, preserving the normal functioning of the State's vital functions.

Logistic Capacity - capacity of the Armed Forces to develop a set of measures to anticipate and provide in quality, quantity and timeliness, the human resources, material and services necessary for their preparation and employment.

National Defense Capabilities – capabilities that the country has to generate a dissuasive effect and support the preservation of national interests, compatible with its political-strategic stature and with the attributions of defending the territory, waters

jurisdictional, continental shelf and

Brazilian airspace. They are composed of different parts of the expressions of National Power and implemented through the coordinated and synergistic participation of government bodies and, when appropriate, of private entities oriented towards defense in its broadest sense.

Military Defense Council (CMiD) – the Military Defense Council (CMiD) is composed of the Commanders of the Navy, Army and Air Force and the Chief of the Joint Chiefs of Staff of the Armed Forces. It is incumbent upon the Council, as part of the Defense Military Structure, to advise the President of the Republic regarding the use of means

military and advising the Minister of

Defense, in the powers provided for in item III, of art. 3, of Decree No. 7.276 of 25

August 2010. When advising the

President of the Republic, with regard to the use of military means, is presided over by the Ministry of Defense.

Contingencies – restriction of expenses foreseen in the annual budget imposed by presidential decree to the executing units of the programs. While the amounts are contingent, no service or purchase of products can be contracted with these resources.

United Nations Convention on the Law of the Sea (UNCLOS) – the UNCLOS established a territorial sea (MT) of 12 nautical miles (22 km), counted from a mainland baseline; a contiguous zone (ZC), adjacent to the MT, which extends from 12 to 24 nautical miles; and an exclusive economic zone (EEZ), a strip of 188 nautical miles, adjacent to the territorial sea (including the ZC). The UNCLOS also established that States may request an increase in their continental shelves, if they meet certain technical criteria, up to a maximum length of 350 nautical miles (648 km) or at a distance that does not exceed 100 nautical miles from the isobath of 2,500 meters (line that joins the depths of 2,500 meters). Domestically, in 1993, Brazil adopted the UNCLOS resolutions of 1982 and 1988, but only in 1994, with the ratification of the 60th country, did the UNCLOS come into force.

D

National Defense – set of attitudes,

State measures and actions for the defense of the National Territory, sovereignty and national interests against predominantly external threats, potential or

manifest.

National Demobilization – is considered as the set of activities planned, guided and undertaken by the State, with a view to the gradual return of the country to a situation of normality, when ceased

or reduced the determining reasons for the

execution of the National Mobilization (Art. 2 of Law nº 11.631, of December 27, 2007).

AND

Elasticity of the Armed Forces – ability to quickly increase the size of the military Forces when circumstances require it, mobilizing resources on a large scale

people and materials in the country.

Nation-State – delimited territory composed of a government and a population of cohesive ethnic-cultural composition.

Political-strategic stature – set of attributes of a nation that are perceived and recognized by other nations and that define the relative level of its participation and

influence in the international context.

Strategic structures - installations, services, goods and systems whose interruption or destruction, in whole or in part, causes serious

social, economic, political, environmental and international impact or security of the state and society.

Budget execution – use of credits allocated in the general budget of the Union and in additional credits, aiming at carrying out the subprojects and/or subactivities assigned to the budgetary units.

F

Singular Force – generic designation of one of the Armed Forces: Navy, Army and Aeronautics.

IBSA Forum – trilateral initiative between India, Brazil and South Africa, designed to promote South-South cooperation.

Established in June 2003, IBSA is also open to concrete cooperation and partnership projects with less developed countries.

G

Commercial G-20 – group of developing countries representing 60% of the rural population, 21% of agricultural production, 26% of exports and 18% of world imports. The grouping comprises 23 countries from three continents – South Africa, Argentina, Bolivia, Brazil, Chile, China, Cuba, Egypt, Ecuador, Philippines, Guatemala, Mexico, India, Indonesia, Nigeria, Pakistan, Peru, Paraguay, Thailand, Tanzania, Uruguay,

Venezuela and Zimbabwe – and defends the ambitious fulfillment of the three pillars of the agricultural mandate of the Doha Round, namely, access to markets (tariff reduction), elimination of export subsidies and reduction of domestic support subsidies (mainly production).

Financial G-20 – group established in 1999 with the aim of bringing together the most systemically important developed and developing countries, with a view to cooperation on economic and financial issues. Are members of the G-20: Africa

South America, Germany, Saudi Arabia, Argentina, Australia, Brazil, Canada, China, South Korea, United States, France, India, Indonesia, Italy, Japan, Mexico, United Kingdom, Russia, Turkey, European Union (European Commission and Presidency of the European Council). G-20 members debate proposals

new growth models and economic stability, with a view to correcting the major international macroeconomic imbalances. The intensification of coordination and exchange of information on national macroeconomic management

will result in an international economy more stable and predictable.

I

Transnational offenses – divided offenses in two major fields: that of crimes against the person, including drug trafficking, arms and ammunition trafficking, human trafficking and the smuggling of

migrants; and financial crimes, such as money laundering and corruption.

Also noteworthy is cybercrime, as a manifestation of the global scope and growing technical complexity of

criminal activities.

Interoperability – ability of national or allied military forces to operate effectively, in accordance with the established command structure, in the execution of a mission of a strategic or tactical, combat or logistical nature, in training or instruction.

J

Inter-American Defense Board – is a international organization composed of civilian and military representatives that provides to the Organization of American States (OAS) and its Member States technical advisory, advisory and educational services in military and defense matters, inherent to the American hemisphere, in order to contribute to the OAS Charter.

L

National Logistics – is understood as the set of activities related to the forecast and provision of the necessary resources to carry out the actions resulting from the National Defense Strategy (Art. 2 of Decree No. 6,592, of October 2, 2008).

M

National Mobilization – is the measure decreed by the President of the Republic, in the event of foreign aggression, to immediately obtain resources and means for the implementation of actions that the National Logistics cannot supply, according to the usual procedures, as well as other needs (Art. 2 of Decree No. 6,592, of October 2, 2008).

O

National Defense Objectives – are conditions to be achieved and maintained, permanently, by the Brazilian nation, in order to ensure National Defense, through an integrated effort of the entire Brazilian nation.

Joint Operation – operation that involves the coordinated use of elements from more than one singular force, with interdependent or complementary purposes, through the constitution of a Joint Command.

Peacekeeping Operations – peace operation that is carried out through a contingent of Naval, Land and Air Forces, provided by Member States, to collaborate with the maintenance of international peace and security.

Interagency Operations – are those involving one or more Armed Forces and agencies, with the purpose of reconciling

interests and coordinate efforts to achieve convergent objectives or purposes that serve the common good, avoiding duplication of actions, dispersion of resources and divergence of solutions with efficiency, effectiveness, effectiveness and economy.

P

National Power – is the ability of the Nation to achieve and maintain national objectives, in accordance with the national will. It manifests itself in five expressions: political, economic, psychosocial, military and scientific-technological.

S

National Security – is the feeling of guarantee for the Nation of the conquest and maintenance of its fundamental objectives, provided by the application of National Power. It allows the preservation of sovereignty and territorial integrity, the realization of national interests, despite pressures and threats of any kind, and the guarantee

to citizens of the exercise of rights and constitutional duties.

Sovereignty - maintenance of the Nation's intangibility, ensuring the capacity for self-determination and coexistence with other nations in terms of equal rights, not accepting any form of intervention in its internal affairs, nor

participation in acts of this nature in relation to other nations.

T

Dual technology – refers to discoveries initially intended for applications in the military area, having their technological base used for uses in the civil area.

Military technology – set of scientific, empirical, intuitive knowledge, as well as skills, experiences and organization, required to produce, make available and use goods and services for war purposes.

Antarctic Treaty – treaty signed in December 1, 1959, as a result of the Washington Conference, in force since June 23, 1961. The adoption of the Antarctic Treaty was only possible through the demilitarization of the continent and the skillful solution found in its art. 4th for territorial questions. Based on an agreement essentially motivated by strategic and security issues, it has been possible, over the years, to develop a network of international standards and conventions for the use and conservation of natural resources. It was also possible, through the Madrid Protocol, to develop a broad environmental protection regime, which declares Antarctica a “natural reserve, dedicated to peace and science”. One of the greatest merits of the treaty, which very well reflects its importance

history, was the creation of a space of peace and cooperation focused on scientific research, a unique example of interaction between the states.

Treaty on the Non-Proliferation of Nuclear Weapons – was signed on July 1, 1968 and entered into force internationally on March 5, 1970. Brazil adhered to the Treaty on September 18, 1998, being enacted by Decree No. 2,864 of December 7 1998. Legislative Decree No. 65 of July 2, 1998, which approved the text of the NPT with a view to adherence by the Brazilian Government, highlighted in its Article 2 that "Brazil's adherence to this

treaty is linked to the understanding of that, under the terms of article VI, effective measures will be taken with a view to the cessation, at an early date, of the nuclear arms race, with the complete elimination of all atomic weapons."

Treaty of Tlatelolco – is the name conventionally given to the Treaty for the Prohibition of Nuclear Weapons in America Latin America and the Caribbean, open for signature in February 1967 in Mexico City. It entered into force in October 2002, having been signed and ratified by all 33 nations of Latin America and the Caribbean. It was signed by Brazil in 1967 and incorporated into the country's legal system, in its entirety, by Decree No. 1,246/1994. Under the Treaty, States agree to prohibit and prevent "testing, use, manufacture, production

or acquisition by any means of any nuclear weapons", in addition to "receiving, storing, installing, moving or in any way possessing any nuclear weapon.

Z

South Atlantic Peace and Cooperation Zone (ZOPACAS) – was established in 1986, through Resolution No. 4, of 2011, of the United Nations General Assembly. It is the main forum for dealing with issues relating to the security of the South Atlantic. This is an initiative that seeks to articulate actions in favor of peace, stability

and the sustainable development of South Atlantic, through the strengthening of coordination and cooperation between its Member States. besides your geopolitical component, ZOPACAS includes commitments to the conservation of the marine environment and the promotion of sustainable development.